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ABSTRACT

The North Carolina End-of-Course Testing Program was established to provide student, school, and school system information about achievement in high school courses. The 59,723 students who took the Algebra I End-of-Course Test in 1987-88 were a subgroup of the school population in the eighth through twelfth grades. The proportion of students taking Algebra I has increased slightly each year since 1986. Each Algebra I student took a test containing 60 common or core items and one of five different sets of 35 items during the final days of the school year. The average core score in 1988 was 39.2, or 65.3 percent correct. On average, the 1988 Algebra I students scored the same as 1987 Algebra I students in 1.5 raw score points higher than 1986 Algebra I students. Performance on the core test differed by parental education, ethnic group, grade level in school, and anticipated final course grade. The select group of students taking Algebra I in the eighth grade had higher average scores than students at any other grade level. The appendix provides the performance in regions and school systems, student characteristics, and state percentile tables. (Author/YP)

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ABSTRACT

The North Carolina End-of-Course Testing Program was established to provide student, school, and school system information about achievement in high school courses. The first Algebra I End-of-Course Test was administered in 1985-86. Algebra II and Biology were added to the testing program in 1986-87 and U.S. History was added in 1987-88. Other high school courses will be added in future years.

The 59,723 students who took the Algebra I End-of-Course Test in 1987-88 were a subgroup of the school population in the eighth through twelfth grades. The proportion of students taking Algebra I has increased slightly each year since 1986. School systems vary in the proportion of students that take Algebra I during their school career and in the proportion of students that take Algebra I at different grade levels. Although students whose parents have less than a high school education and black students appear to be underrepresented in Algebra I classes across the state, the proportion of Algebra I students that are black has increased.

Each Algebra I student took a test containing 60 common or core items and one of five different sets of 35 items during the final days of the school year. The average core score in 1988 was 39.2, or 65.3 percent correct. On average, the 1988 Algebra I students scored the same as 1987 Algebra I students and 1.5 raw score points higher than 1986 Algebra I students. Performance on the core test differed by parental education, ethnic group, grade level in school, and anticipated final course grade. The select group of students taking Algebra I in the eighth grade had higher average scores than students at any other grade level. The standards for eighth-grade performance appear to be higher than the standards for other students.

Schools and school systems can identify strengths and weaknesses in their instructional programs by examining relative performance on the goals and objectives measured by the 235 items administered in 1988. As in the two previous years, 1988 average performance on the basic goals taught early in the course was higher than average performance on the more complex goals taught at the end of the course. Also, it appears that some areas of the curriculum need greater emphasis statewide.

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NORTH CAROLINA END-OF-COURSE TESTING PROGRAM

ALGEBRA I - 1988

Introduction

North Carolina is in the process of developing end-of-course tests within several subject areas. The purposes of the tests are two-fold:

1. The tests will provide information about each individual student's performance relative to that of other students in North Carolina.

2. The tests will provide information about school and school system achievement on the subject area goals and objectives specified in the *Standard Course of Study* and the *Teacher Handbook*.

The development of the end-of-course tests will require many years of effort. End-of-course tests are the final product of a process which includes: curriculum development and review; statewide curriculum surveys; test specification; the writing, review, and field-testing of a large pool of test items matched to objectives in the *Teacher Handbook*; test construction using selected items from the pool; and review, field-testing, and equating of different forms of each test. Several forms of each end-of-course test are developed so that the same tests are not administered in subsequent years.

Based on statewide enrollment patterns and recommendations made by two commissions on education, the end-of-course tests chosen for initial development were Biology and Algebra I. Item pools for these two courses were built in the spring of 1985. The results of the item development phase indicated that the Algebra I items were sufficient in quality and quantity to merit building end-of-course tests. Additional Biology items and an item bank for Algebra II were developed during the 1985-86 school year, including field testing in selected sites in May of 1986. In addition to Algebra I, both Biology and Algebra II End-of-Course Tests were administered statewide at the end of the 1986-87 school year. U. S. History items were field tested in 1986-87 and the U. S. History End-of-Course Test was added in 1987-88. Geometry and Chemistry items, including proofs for Geometry, were developed and field tested during 1987-88. Current plans are to add the Chemistry and Geometry End-of-Course Tests to the administration of end-of-course tests at the end of the 1988-89 school year.

Although end-of-course tests for different subject areas will vary in length, 110 minutes will be sufficient for administration in all subjects. The State Board of Education requires that end-of-course tests be administered during 110-minute periods within the last 10 days of school, and recommends that they be administered during final exam periods.

The first North Carolina Algebra I End-of-Course Test was administered at the end of the 1985-86 school year. Five forms of the Algebra I test were administered within each classroom. Each form consisted of 60 common items (the core test) and 40 variable items. In 1987 and 1988, five additional forms were administered within each classroom each year. The 1987 and 1988 test forms included new, statistically equivalent, core tests (60 items) and 35 new variable items. Comparisons of performance on the core items are appropriately made across individual students. Average core scores at the initial administration of the test in 1986 provide a baseline with which to compare subsequent performance. Statewide performance on the entire set of 235 items provides a standard to which school and school system achievement of goals and objectives can be compared.

Characteristics of Algebra I Students

Other North Carolina testing programs assess achievement in basic subject areas of an entire cohort or class of students. End-of-course assessments are different in two ways. First, some of the courses are offered to students at different grade levels. Second, some courses are not required of all students; the students who take the courses are a subgroup of the total student population.

Table 1 compares certain characteristics of Algebra I students with the broader population of all enrolled students. The top portion of the table provides the distribution of Algebra I students at various grade levels compared with the average daily membership in those grades. While the largest percentage of Algebra I students (41.4) was in the ninth grade, 16.8 percent were in the eighth grade and 29.8 percent were in the tenth grade. About 12.2 percent of the eighth-grade class, 27.4 percent of the ninth-grade class, and 20.8 percent of the tenth-grade class were enrolled in Algebra I during 1987-88. In 16 of the 140 school systems in North Carolina 20 percent or more of eighth-grade students were enrolled in Algebra I. No eighth-grade students were enrolled in Algebra I in 25 school systems.

Although the number of students taking Algebra I has decreased over the previous two years, the proportion of enrolled students taking Algebra I has increased slightly. From the cross-section of 59,723 students who took Algebra I in different grade levels in 1987-88, an estimate of the percent of a cohort, or class, of students who eventually take Algebra I in their school career can be obtained by using enrollment in one grade level as a cohort estimate. Using ninth-grade enrollment, an estimate of 66.2 percent will take Algebra I before they graduate from high school.* This estimate varies considerably among school systems, from a low of 38.0 percent to a high of 96.1 percent (see Table 11 in the Appendix).

The second section of Table 1 compares the ethnic composition of Algebra I with the ethnic composition of K-12 pupil membership.** Compared with their distribution in the school population, black students appear to be underrepresented and white students appear to be overrepresented in Algebra I classrooms across the state. However, the gap in participation by ethnic group has narrowed slightly since 1986-87.

The third section of Table 1 compares parental education levels of Algebra I students with parental education levels of students in the eighth grade statewide.*** Students who have parents with an education beyond high school composed 62.2 percent of Algebra I students but only 41.6 percent of the eighth-grade class. On the other hand, students with less educated parents appear to be underrepresented in Algebra I classes across the state.

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*The proportion of North Carolina students taking Algebra I, both within grade level and within a cohort of students, is similar to a national estimate of Algebra I participation reported by Usiskin in the September, 1987, issue of *Mathematics Teacher*. Usiskin predicts growth in Algebra I participation, continuing a long trend of increasing percentages of students enrolled in algebra courses and reflecting recent state and school system requirements of algebra for high school graduation.

**Obtained from Table 11, North Carolina Public Schools, *Statistical Profile 1988*.

***Teachers recorded education level of the most educated parent of eighth grade students taking the California Achievement Tests in 1987-88. Algebra I students recorded education level of their most educated parent.

Table I

North Carolina Algebra I Students* Compared with 1987-88 First-Month Average Daily Membership in Eighth, Ninth, Tenth, Eleventh, and Twelfth Grades

GRADE	ADM	Algebra I Students*	Percent of ADM	Percent of Algebra I Students
Eighth	82,660	10,047	12.2	16.8
Ninth	90,202	24,734	27.4	41.4
Tenth	85,783	17,826	20.8	29.8
Eleventh	80,154	5,506	6.9	9.2
Twelfth/Other	71,308	1,610	2.3	2.7
TOTAL	410,107	59,723	14.6	99.9

Percent of a class of students** taking Algebra I = 66.2

1987-1988 K-12 Pupil Membership*** and Algebra I Students by Ethnic Group

Ethnic Group	Membership	Percent of Membership	Algebra I Students*	Percent of Algebra I
American Indian	17,756	1.6	774	1.3
Black	328,670	30.3	15,540	26.2
White	726,181	66.9	42,177	71.0
Other	12,337	1.1	926	1.6
TOTAL	1,084,944	99.9	59,417	100.1

Parental Education of Eighth-Grade and Algebra I Students

Parental Education	Eighth Grade Students****	Percent of Students****	Algebra I Students*	Percent of Algebra I
Eighth Grade or Less	2,186	2.9	569	1.0
8th to 12th	11,126	14.5	5,161	8.8
High School Graduate	31,474	41.0	16,471	28.1
More Than High School	31,893	41.6	36,516	62.2
TOTAL	76,679	100.0	58,717	100.1

*As identified in the 1987-1988 administration of the Algebra I End-of-Course Test.
**The 1987-88 ninth-grade class was used as a proxy for a class of students.
***Obtained from Table 11, North Carolina Public Schools, *Statistical Profile 1988*.
****As identified in 1987-88 administration of the California Achievement Test.

Student Performance on the Core Test

Summary scores for the 1988 core test and, for comparison, summary scores for the 1986 and 1987 administrations, are presented in Table 2. In 1988, the average score for the 59,723 students taking an equivalent core test was 39.2, or 65.3 percent correct. On average, 1988 Algebra I students scored the same as 1987 Algebra I students, and 1.5 raw score points higher than 1986 Algebra I students. See the Appendix for 1986, 1987, and 1988 state percentile distributions.

Group achievement on tests, whether for schools, school systems, or the state, is usually reported using summary numbers such as the average or median which indicate typical performance for the group. One number, whether it is the average or the median score, provides limited information about performance. *Box and whisker plots* are graphs which describe not only typical performance, but also the performance of most of the students by showing the spread of scores. Box and whisker plots allow the comparison of the high and low scores for different groups as well as the middle scores.

Figure 1 shows how to interpret the box and whisker plots using statewide Algebra I scores for 1987-88. The *box* represents the middle 50% of scores with the median represented by a horizontal line inside the box. An 'x' inside the box shows the location of the average (mean) score. The *whiskers* extend up to the 90th percentile and down to the 10th percentile. The entire figure shows the range of the middle 80% of scores. As can be seen in Figure 1, the middle 50 percent of Algebra I students answered between 33 and 46 items correctly. Ten percent of the Algebra I students scored above 51 and ten percent scored below 26.

Figure 1. Box and Whisker Plot of Distribution of 1988 Statewide Algebra I Core Scores with Interpretive Legend

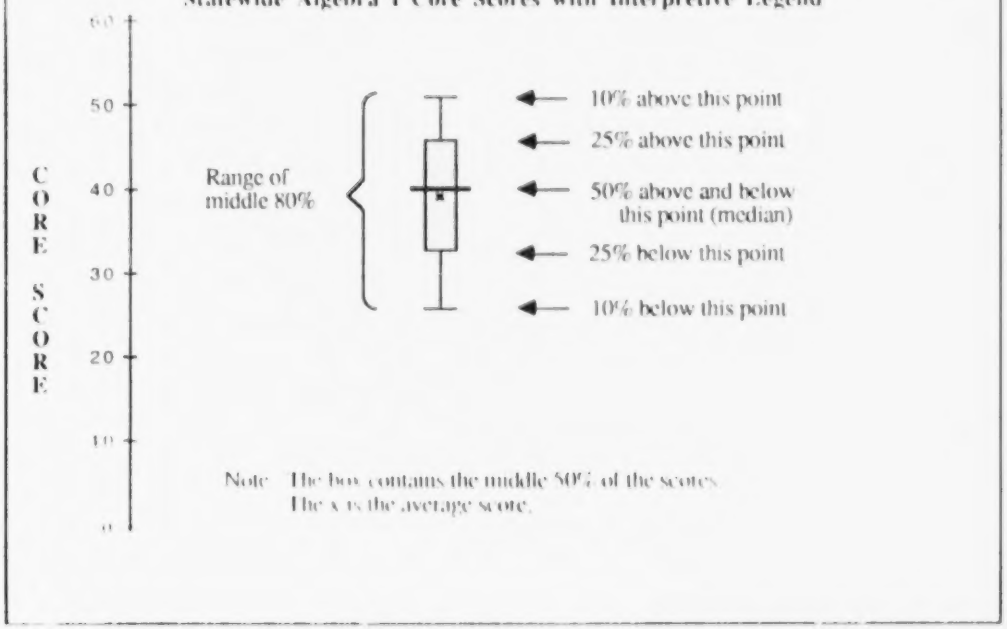


Table 2

Average Performance on Algebra I Core Test: 1986-1988

GROUP	1986 Number Tested	1986 Average Score	1987 Number Tested	1987 Average Score	1988 Number Tested	1988 Average Score
State	63,330	37.7	61,003	39.2	59,723	39.2
Sex						
Male	29,242	37.5	28,360	38.9	27,869	38.9
Female	33,699	38.0	32,243	39.5	31,627	39.4
Ethnic Group						
American Indian	869	33.2	820	35.9	774	34.9
Black	14,681	34.8	14,989	35.9	15,540	36.0
White	46,487	38.7	43,913	40.3	42,177	40.4
Other	833	41.6	929	43.0	926	42.8
Parental Education						
Less than Eighth Grade	658	34.7	531	37.7	569	36.5
Eighth to Twelfth	5,542	34.6	5,205	36.3	5,161	36.2
High School Graduate	17,635	36.5	16,833	37.9	16,471	37.6
More than Twelfth	37,123	39.0	35,839	40.5	36,516	40.4
Grade in School						
Eight	10,002	44.2	10,142	45.6	10,047	45.9
Nine	28,737	38.7	26,017	40.4	24,734	40.5
Ten	18,225	34.4	18,462	35.6	17,826	35.6
Eleven	4,849	33.0	4,868	33.9	5,506	33.8
Other	1,517	33.6	1,514	34.9	1,610	34.5
Type of Class						
Algebra I, Part II*			7,387	37.0	7,544	37.0
Regular Algebra I			45,741	38.8	46,486	38.8
Honors Algebra I			3,228	48.6	3,406	48.3

*Algebra I, Part II, is the second year of a two-year Algebra I course. Type of Class was not reported in 1986.

Table 2 also shows average performance on the 60-item core test by sex, parental education, ethnic group, grade in school, and type of class. Figures 2 through 5 show the distributions of Algebra I scores by various groups using box and whisker plots. Average performance for males was similar to average performance for females. The distributions of scores are also similar for males and females.

On average, white students and 'other' students scored higher than American Indian students and black students. Average scores and score distributions are similar for the three groups whose parents have no more than a high school education. Students who have parents educated beyond high school had higher average scores than students who have less educated parents.

The largest difference in average core scores and score distributions appeared among students taking Algebra I in different grade levels. Only 12.2 percent of the eighth-grade class took Algebra I; this select group of high achieving students scored higher than any other group. The average score for eighth-grade students was 45.9, more than 5 points higher than the average score for ninth-grade students, and more than 10 points higher than the average score for tenth-grade students. In Figure 5 it can be seen that 90 percent of eighth grade students scored above 35 while 75 percent of ninth grade students scored above this point. Less than 50 percent of eleventh grade Algebra I students scored above this point.

The average score for students in the second year of a two-year Algebra I course was only 1.8 score points lower than that of regular Algebra I students, indicating that while some students may require two years to master the Algebra I course content, their performance was similar to those who complete Algebra I in one year. Students in honors or advanced Algebra I classes scored significantly higher than regular Algebra I students.

Combining Performance and Participation: Yield and Effective Yield

Since Algebra I is a selective course not taken by all students, performance may be related to participation within school systems or within the state. For example, if only the top 20 percent of students take Algebra I, scores will necessarily be higher than if the top 50 percent take Algebra I. *Yield* is an index of the effectiveness of an Algebra I program which takes into account both participation and performance. It is calculated by multiplying the percent of a class taking Algebra I by the percent of core items answered correctly and then multiplying by 100. Yield would be 100 if all students took Algebra I and all students achieved a perfect score. For the state, about 66.2 percent of a class of students took Algebra I in 1987-88 and these students achieved an average of 65.3 percent of core items correct, producing a yield of 43.2. If average achievement does not change, yield will increase whenever participation increases.

Effective Yield is a similar index but it counts as 'participating' in Algebra I only those students whose achievement is above a certain cutoff point. This cutoff point is an estimation of whether or not they will pass the course. The estimate for the cutoff point is 28. In 1985-86 Algebra I teachers indicated that approximately 14.7% of their students would receive a final grade of 'F'; the same year about 14.2% of students received a score below 28. For the state, the 'effective' percent of class, i.e. students scoring at or above 28 in 1987-88, was 52,568 of the 90,202 ninth grade students, or 58.3%, producing a yield of 38.1. Effective yield will be the same as yield only when all students taking Algebra I achieve at or above the estimated passing score of 28. Therefore, the effective yield index will normally be lower than the yield index.

Figure 2. Distributions of Algebra I Core Scores by Sex -- 1988

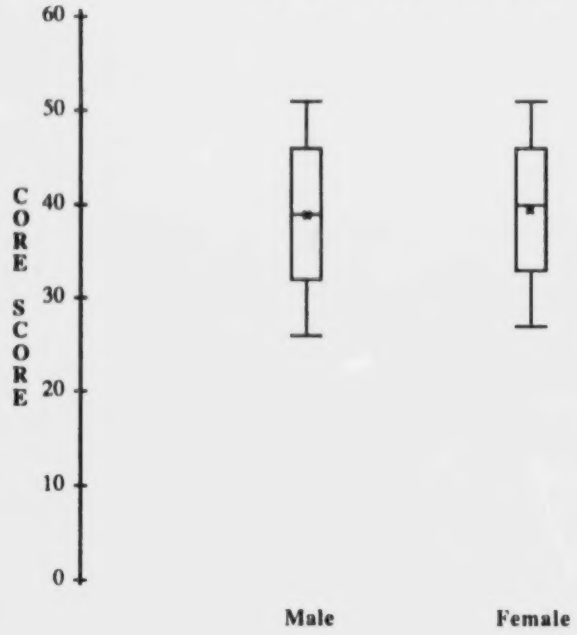


Figure 3. Distributions of Algebra I Core Scores by Ethnic Group -- 1988

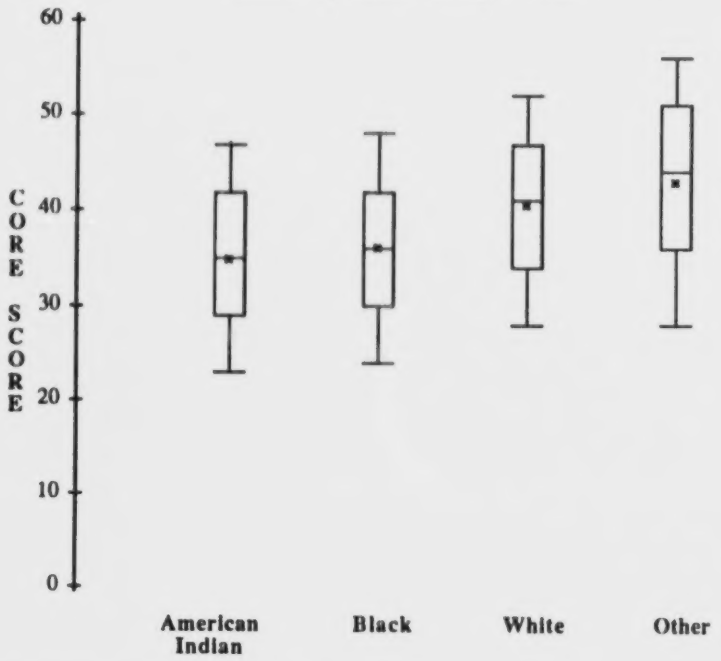


Figure 4. Distributions of Algebra I Core Scores by Parental Education -- 1988

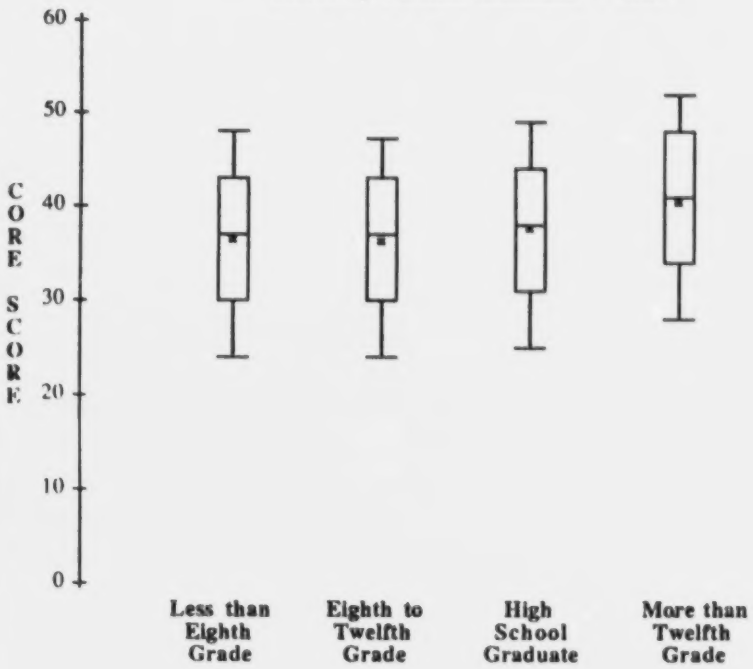


Figure 5. Distributions of Algebra I Core Scores by Grade Level -- 1988

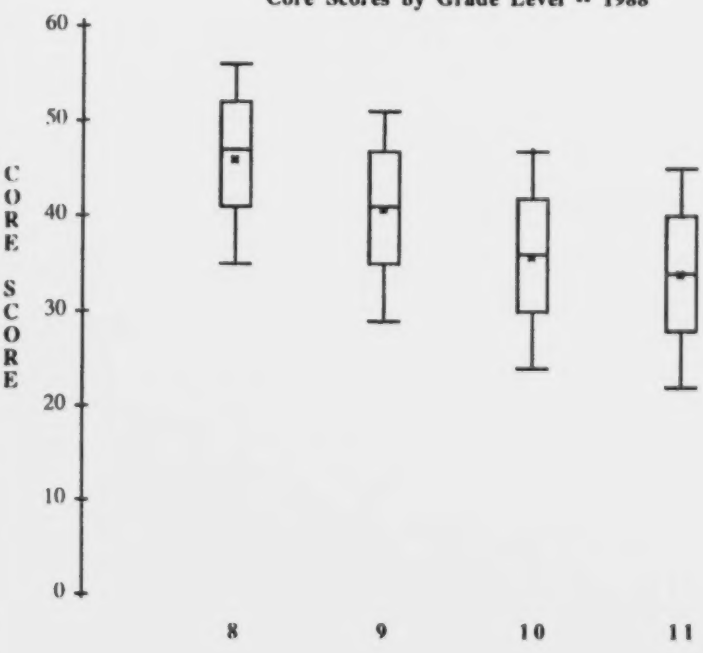


Table 3 shows the yield and effective yield indices for 1986 through 1988. Both indices have increased slightly during the three year period. Since there was no change in core performance from 1987 to 1988, the small increase in yield and effective yield is due to the small increase in participation.

Table 3

Algebra I Yield and Effective Yield Indices for 1986-1988

	1986	1987	1988
Yield	40.3	42.6	43.2
Effective Yield	34.6	36.8	38.1

The 1986 through 1988 core performance, participation (percent of class), yield, and effective yield for all 140 school systems in the state are presented by region in Table 10 in the Appendix. Comparisons among school systems should always be sensitive to the fact that the social and demographic factors which are strongly related to differences in achievement are not distributed evenly across the state. These factors influence the yield indices as well as performance. For example, school systems in high socio-economic areas should have both high participation and performance, resulting in high yield and effective yield indices. One appropriate comparison might be among school systems with similar socio-economic characteristics. Another would involve comparing yield and effective yield indices for a school system across time to look for changes in participation and performance.

Anticipated Final Grades and Scores on the Core Test

Algebra I teachers were asked to record each student's anticipated final grade on each answer sheet after the test was administered. Final grades were recorded for 58,302 of 59,723 Algebra I students. Table 4 gives the average score for various grade groups on the core test and the percentages of students who were to receive the various grades for 1986 through 1988. A consistent difference of about 5 raw score points exists between score averages for different anticipated final grades. This pattern is an indication of test validity in that the results parallel the grading practices of teachers. The average for 'C' students was similar to the statewide average in all three years, placing these students in the middle of the score distribution.

Table 5 compares the average scores by anticipated grades between eighth and ninth-grade students for 1986, 1987, and 1988. Average scores for the select group of eighth-grade students have been higher than those for ninth-grade students at each anticipated final grade in each year. For example, in 1986, the average score for ninth-grade students receiving a 'C' was similar to the average score for eighth-grade students receiving a 'D'. The difference between average scores for eighth and ninth graders within each anticipated final grade group has decreased each year. On average, ninth-grade students receiving each final grade scored between 3.4 and 5.2 points lower than eighth-grade students receiving the same grade in 1986. In 1987, the difference between ninth and eighth graders was between 2.7 and 4.0 score points for each letter grade and in 1988 the difference was between 2.6 and 3.6 score points. Greater proportions of students receive 'A's or 'B's in the eighth grade than in the ninth grade and greater proportions of ninth-grade students receive 'D's or 'F's than eighth-grade students.

Box and whisker plots for the score distributions for each letter grade are displayed in Figure 6. The plot illustrates the spread of score points within letter grades and overlap in distributions across letter grades. For example, while the typical 'F' student scored well below the typical 'D' student, 10 percent of 'F' students received an above average core score.

Table 4

Average 60-Item Core Scores by Anticipated Final Grade and Percentage of Students Receiving Each Grade*: Algebra I End-of-Course Test: 1986-1988

Grades	1986		1987		1988	
	Average Scores	Percentages	Average Scores	Percentages	Average Scores	Percentages
A	47.3	12.6	48.5	12.8	48.8	11.9
B	42.2	25.0	43.9	24.2	44.0	23.8
C	37.8	27.3	39.2	27.0	39.4	27.5
D	33.6	20.5	34.8	20.7	35.2	21.2
F	28.8	14.7	29.1	15.4	29.4	15.5

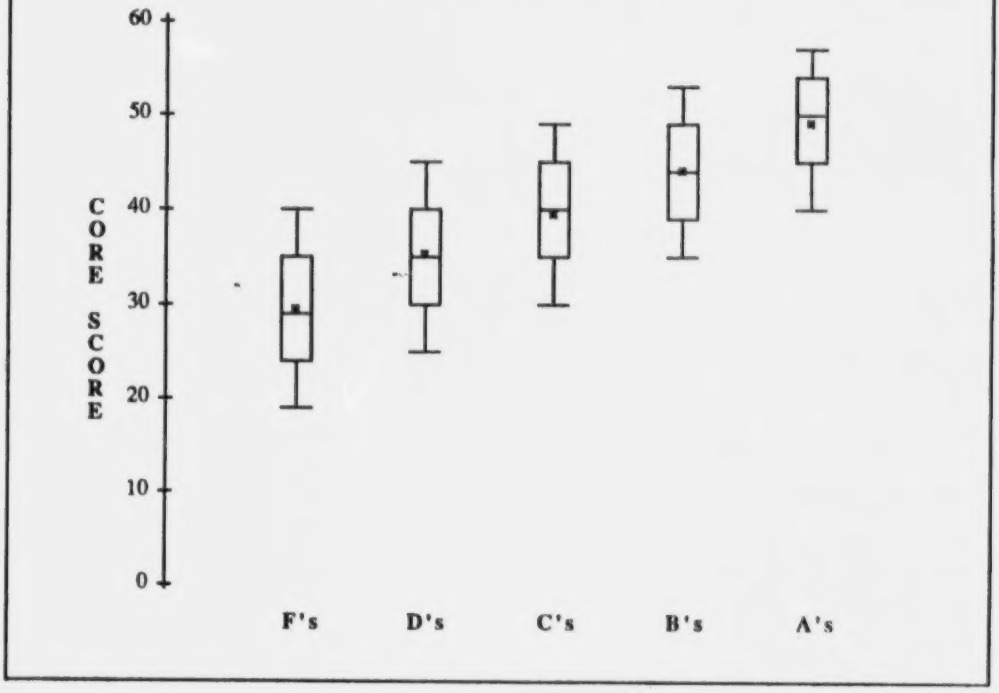
Table 5

Average 60-Item Core Scores by Anticipated Final Grade and Percentage of Students Receiving Each Grade within Eighth and Ninth Grades: Algebra I End-of-Course Test: 1986-1988

Grades	1986				1987				1988			
	Average Scores		Percentages		Average Scores		Percentages		Average Scores		Percentages	
	Grade 8	Grade 9	Grade 8	Grade 9	Grade 8	Grade 9	Grade 8	Grade 9	Grade 8	Grade 9	Grade 8	Grade 9
A	50.1	46.7	25.2	14.1	51.1	48.3	26.0	14.7	51.2	48.6	25.4	13.3
B	45.7	42.1	37.5	27.5	46.7	44.0	37.7	27.1	47.0	44.2	37.1	26.3
C	41.7	38.2	25.1	27.6	42.8	39.9	23.6	28.1	42.9	40.3	24.4	28.5
D	38.3	34.4	9.3	18.9	39.2	35.9	9.4	18.3	39.6	36.6	9.5	19.2
F	34.6	29.4	3.0	11.8	34.2	30.2	3.3	11.8	34.4	30.8	3.6	12.8

*1986: N=52,648 1987: N=53,838 1988: N=58,302

Figure 6. Distributions of Algebra I Core Scores by Anticipated Final Grade -- 1988



Average Performance on the Curriculum Test

Table 6 shows average performance on the 12 goals as measured by the 235 items assessed in 1988, for all Algebra I students in the State and by sex, ethnic group, parental education level, and grade in school. Performance on objectives measured by 4 or more items in 1988 is presented in Table 7. Goal and objective scores yield important information about performance within specific areas in the curriculum. The average percentage correct of all items measured in 1988 is 65.5.

The Algebra I goals and objectives are cumulative and sequential and therefore increase in difficulty and complexity from Goal 1 through Goal 12. In general, average performance on the goals reflects this pattern with higher average scores occurring on the early goals and lower average scores occurring on the later goals. Goal performance can be grouped into four categories based on the average percentages correct:

1. Average percentages correct in the 70's: Goals 1, 2, 3, 4, and 5;
2. Average percentages correct in the 60's: Goals 6 and 9;
3. Average percentages correct in the 50's: Goals 7 and 11; and
4. Average percentages correct in the 30's and 40's: Goals 8, 10, and 12.

In 1988, 11 of 32 objectives in Goals 1 through 5 were measured by 4 or more items. Average student performance was high on all but one of these objectives. Student achievement was the lowest on an objective which is important to more advanced mathematics: Objective 4.7, "Graph a line given its slope and y-intercept".

Of the two objectives reported in Goal 6, average performance was high on an objective in which students solve equations by using the addition property of equality and low on an objective in which students solve equations in which numerical coefficients are fractions. Goal 9, "Perform operations with polynomials", was rated as basic to the Algebra I curriculum by more teachers than any other goal in a statewide survey of Algebra I teachers. Four Goal 9 objectives are reported this year .

Two difficult areas to teach are contained in Goal 7, "Solve linear inequalities", and Goal 11, "Perform operations with algebraic fractions". Overall percent correct scores for these goals were 50.9 and 52.5, respectively. Performance was quite low (27.5 percent) in Goal 11 when students had to "Add and subtract algebraic fractions".

Goal 8 involves solving systems of linear equations. Of the three objectives reported, student performance was weakest on an objective in which they had to determine the equation of a line given the slope and one point and strongest on two objectives in which they solved open sentences in two variables or used the substitution method to solve pairs of linear equations. Average performance on Goal 10, "Solve quadratic equations", was 43.1 percent correct. The very low performance on Goal 12 (35.3 percent correct) may be due to the fact that it is taught at the very end of the year and some teachers covered the topics while others did not.

Statewide performance across all Algebra I goals and objectives shows areas of strength and areas in which improvement is needed. As schools and school systems examine their own performance on these goals and objectives, they can identify patterns of strengths and weaknesses relative to statewide performance.

TABLE 6

1988 Summary Results for Algebra I: 60-Item Core Test and 235-Item Curriculum Test

STATE REPORT

GOALS

GOAL 1: USE THE LANGUAGE OF ALGEBRA
GOAL 2: USE THE STRUCTURAL PROPERTIES OF NUMBER SYSTEMS
GOAL 3: PERFORM OPERATIONS WITH RATIONAL NUMBERS
GOAL 4: LOCATE NUMBERS ON NUMBER LINE OR COORDINATE PLANE
GOAL 5: PERFORM OPERATIONS WITH REAL NUMBERS
GOAL 6: SOLVE LINEAR EQUATIONS
GOAL 7: SOLVE LINEAR INEQUALITIES
GOAL 8: UNDERSTAND AND SOLVE SYSTEMS OF LINEAR EQUATIONS
GOAL 9: PERFORM OPERATIONS WITH POLYNOMIALS
GOAL 10: SOLVE QUADRATIC EQUATIONS
GOAL 11: PERFORM OPERATIONS WITH ALGEBRAIC FRACTIONS
GOAL 12: SIMPLIFY EXPRESSIONS WHICH CONTAIN RADICALS

	NUMBER TESTED	GOAL 1	GOAL 2	GOAL 3	GOAL 4	GOAL 5	GOAL 6	GOAL 7	GOAL 8	GOAL 9	GOAL 10	GOAL 11	GOAL 12	AVG CORE	PCT CORE	AVG ALL ITEMS	PCT ALL ITEMS
NUMBER OF ITEMS		17	22	7	19	31	31	4	22	46	8	23	5	60	60	235	235
ALL STUDENTS TESTED																	
	59723	74.3	78.2	75.6	72.3	76.7	65.1	50.9	48.1	67.7	43.1	52.5	35.3	39.2	65.3	153.9	65.5
SEX																	
MALE	27869	74.2	77.2	74.3	72.7	76.1	65.8	50.8	47.6	66.6	43.4	51.3	35.4	38.9	64.9	152.7	65.0
FEMALE	31627	74.4	79.2	76.7	72.1	77.2	64.6	51.1	48.5	68.7	42.8	53.5	35.2	39.4	65.7	154.9	65.9
PARENTAL EDUCATION																	
LESS THAN 8TH	569	69.7	72.9	73.8	68.7	72.8	60.5	47.7	43.0	62.7	38.5	49.5	27.1	36.5	60.8	143.4	61.0
8TH TO 12TH	5161	68.7	73.4	71.4	68.9	73.3	58.5	44.8	41.4	62.1	36.2	47.7	30.7	36.2	60.3	141.6	60.3
HIGH SCHOOL	16471	71.4	76.0	73.6	70.4	75.0	61.9	47.6	44.6	64.9	38.6	49.7	32.2	37.6	62.7	147.5	62.8
MORE THAN 12TH	36516	76.6	80.1	77.2	73.9	78.1	67.7	53.5	50.8	70.0	46.2	54.6	37.5	40.4	67.4	158.9	67.6

NOTE: THE NUMBER OF ITEMS IN EACH GOAL AREA IS DIRECTLY PROPORTIONAL TO THE NUMBER OF OBJECTIVES FOR THE GOAL. FIVE FORMS OF A 95-ITEM TEST WERE ADMINISTERED IN EVERY CLASSROOM. SIXTY OF THE 95 ITEMS WERE COMMON ACROSS THE FIVE FORMS (CORE). THE REMAINING 35 ITEMS VARIED BY FORM, SO THAT 235 ITEMS WERE MEASURED IN EVERY CLASSROOM. GOAL AREAS INCLUDE BOTH CORE AND VARIABLE ITEMS.

TABLE 6, cont'd.

NORTH CAROLINA END-OF-COURSE TESTING PROGRAM

ALGEBRA I --- 1988

STATE REPORT

GOALS

GOAL 1: USE THE LANGUAGE OF ALGEBRA
GOAL 2: USE THE STRUCTURAL PROPERTIES OF NUMBER SYSTEMS
GOAL 3: PERFORM OPERATIONS WITH RATIONAL NUMBERS
GOAL 4: LOCATE NUMBERS ON NUMBER LINE OR COORDINATE PLANE
GOAL 5: PERFORM OPERATIONS WITH REAL NUMBERS
GOAL 6: SOLVE LINEAR EQUATIONS
GOAL 7: SOLVE LINEAR INEQUALITIES
GOAL 8: UNDERSTAND AND SOLVE SYSTEMS OF LINEAR EQUATIONS
GOAL 9: PERFORM OPERATIONS WITH POLYNOMIALS
GOAL 10: SOLVE QUADRATIC EQUATIONS
GOAL 11: PERFORM OPERATIONS WITH ALGEBRAIC FRACTIONS
GOAL 12: SIMPLIFY EXPRESSIONS WHICH CONTAIN RADICALS

	NUMBER TESTED	GOAL 1	GOAL 2	GOAL 3	GOAL 4	GOAL 5	GOAL 6	GOAL 7	GOAL 8	GOAL 9	GOAL 10	GOAL 11	GOAL 12	AVG CORE	PCT CORE	AVG ALL ITEMS	PCT ALL ITEMS
NUMBER OF ITEMS		17	22	7	19	31	31	4	22	46	8	23	5	60	60	235	235
GRADE IN SCHOOL																	
EIGHT	10047	85.4	88.2	83.3	79.6	83.2	77.9	65.1	62.1	80.7	61.3	64.4	43.9	45.9	76.4	180.1	76.6
NINE	24734	76.6	80.5	78.3	73.9	78.1	67.9	53.3	51.0	70.4	45.8	54.6	37.1	40.5	67.6	159.3	67.8
TEN	17826	68.5	72.9	70.8	68.5	73.4	58.1	43.5	40.3	60.6	33.6	45.8	30.2	35.6	59.3	139.6	59.4
ELEVEN	5506	65.1	69.5	67.0	65.9	70.9	54.6	41.1	37.1	57.5	31.1	44.6	28.9	33.8	56.4	132.9	56.6
OTHER	1610	66.0	69.2	68.9	66.9	70.2	56.6	42.3	39.1	58.2	33.3	46.2	31.1	34.5	57.4	135.2	57.5
ETHNIC GROUP																	
AMER. INDIAN	774	65.8	71.6	66.2	66.1	70.5	56.5	39.6	40.9	58.9	33.3	44.4	26.6	34.9	58.2	135.4	57.6
BLACK	15540	67.4	72.8	71.5	67.4	73.0	57.3	44.1	41.6	62.5	34.7	47.9	30.7	36.0	60.0	140.7	59.9
WHITE	42177	76.9	80.3	77.2	74.2	78.1	68.0	53.6	50.4	69.7	46.2	54.2	36.9	40.4	67.3	158.8	67.6
OTHER	926	78.1	81.2	81.8	74.9	79.2	71.4	58.3	56.0	74.2	51.7	60.2	44.0	42.8	71.3	166.8	71.0

NOTE: THE NUMBER OF ITEMS IN EACH GOAL AREA IS DIRECTLY PROPORTIONAL TO THE NUMBER OF OBJECTIVES FOR THE GOAL. FIVE FORMS OF A 95-ITEM TEST WERE ADMINISTERED IN EVERY CLASSROOM. SIXTY OF THE 95 ITEMS WERE COMMON ACROSS THE FIVE FORMS (CORE). THE REMAINING 35 ITEMS VARIED BY FORM, SO THAT 235 ITEMS WERE MEASURED IN EVERY CLASSROOM. GOAL AREAS INCLUDE BOTH CORE AND VARIABLE ITEMS.

TABLE 7

1988 Summary Results for Algebra I Goals and Objectives

GOAL 1:	USE THE LANGUAGE OF ALGEBRA (17)	74.1
1.1:	SIMPLIFY NUMERICAL EXPRESSIONS (1)	***
1.2:	EVALUATE VARIABLE EXPRESSIONS (5)	76.6
1.3:	EVALUATE EXPONENTIAL EXPRESSIONS (4)	73.4
1.4:	USE 'ORDER OF OPERATIONS' TO EVALUATE EXPRESSIONS (2)	***
1.5:	EVALUATE FORMULAS WHEN THE REPLACEMENT VALUES ARE GIVEN (4)	70.1
1.6:	CONVERT WORD PHRASES INTO SYMBOLS (1)	***
GOAL 2:	USE THE STRUCTURAL PROPERTIES OF NUMBER SYSTEMS (22)	78.2
2.1:	USE THE COMMUTATIVE PROPERTY OF ADDITION TO SIMPLIFY EXPRESSIONS OR COMPUTATIONAL PROCESSES WITH REAL NUMBERS (3)	***
2.2:	USE THE ASSOCIATIVE PROPERTY OF ADDITION TO SIMPLIFY EXPRESSIONS OR COMPUTATIONAL PROCESSES WITH REAL NUMBERS (5)	65.7
2.3:	USE THE DISTRIBUTIVE PROPERTY OF MULTIPLICATION OVER ADDITION TO SIMPLIFY EXPRESSIONS OR COMPUTATIONAL PROCESSES WITH REAL NUMBERS (3)	***
2.4:	USE THE RECIPROCAL, OR MULTIPLICATIVE INVERSE, OF A NUMBER TO SIMPLIFY EXPRESSIONS OR COMPUTATIONAL PROCESSES WITH REAL NUMBERS (3)	***
2.5:	USE THE COMMUTATIVE PROPERTY OF MULTIPLICATION TO SIMPLIFY EXPRESSIONS OR COMPUTATIONAL PROCESSES WITH REAL NUMBERS (1)	***
2.6:	USE THE ASSOCIATIVE PROPERTY OF MULTIPLICATION TO SIMPLIFY EXPRESSIONS OR COMPUTATIONAL PROCESSES WITH REAL NUMBERS (3)	***
2.7:	USE THE DISTRIBUTIVE PROPERTY TO SIMPLIFY EXPRESSIONS (4)	80.2
GOAL 3:	PERFORM OPERATIONS WITH RATIONAL NUMBERS (7)	75.6
3.1:	USE < OR > TO COMPARE TWO RATIONAL NUMBERS (2)	***
3.2:	EXPRESS RATIONAL NUMBERS IN FRACTION OR DECIMAL FORM (5)	76.8
GOAL 4:	LOCATE NUMBERS ON NUMBER LINE OR COORDINATE PLANE (19)	72.3
4.1:	GRAPH SETS OF REAL NUMBERS ON THE NUMBER LINE (5)	95.6
4.2:	USE THE NUMBER LINE TO ADD REAL NUMBERS (2)	***
4.3:	GRAPH ORDERED PAIRS OF NUMBERS ON THE COORDINATE PLANE (3)	***
4.4:	GRAPH A RELATION ON THE COORDINATE PLANE (2)	***
4.6:	GRAPH A LINEAR EQUATION IN TWO VARIABLES (3)	***
4.7:	GRAPH A LINE GIVEN ITS SLOPE AND Y-INTERCEPT (4)	41.4

NOTE:

THE NUMBER OF ITEMS IN EACH GOAL AREA IS DIRECTLY PROPORTIONAL TO THE NUMBER OF OBJECTIVES FOR THE GOAL. FIVE FORMS OF A 95-ITEM TEST WERE ADMINISTERED IN EVERY CLASSROOM. SIXTY OF THE 95 ITEMS WERE COMMON ACROSS THE FIVE FORMS (CORE). THE REMAINING 35 ITEMS VARIED BY FORM, SO THAT 235 ITEMS WERE MEASURED IN EVERY CLASSROOM. THE STARRED OBJECTIVES WILL BE REPORTED IN FUTURE YEARS.

TABLE 7, cont'd

GOAL 5:	PERFORM OPERATIONS WITH REAL NUMBERS (31)	76.7
5.1:	DETERMINE THE OPPOSITE, OR ADDITIVE INVERSE, OF A NUMBER (5)	73.0
5.2:	FIND THE ABSOLUTE VALUE OF A NUMBER (4)	69.5
5.3:	USE < OR > TO COMPARE TWO NUMBERS (1)	***
5.4:	ADD REAL NUMBERS (1)	***
5.5:	SUBTRACT REAL NUMBERS (2)	***
5.6:	MULTIPLY REAL NUMBERS (2)	***
5.7:	DIVIDE REAL NUMBERS (3)	***
5.8:	DISTINGUISH BETWEEN RATIONAL AND IRRATIONAL NUMBERS (3)	***
5.9:	FIND THE SQUARE ROOT OF A NUMBER WHICH IS A PERFECT SQUARE (3)	***
5.10:	USE A CALCULATOR, TABLE OF SQUARE ROOTS, OR AN ALGORITHM TO FIND A DECIMAL APPROXIMATION FOR THE SQUARE ROOT OF A REAL NUMBER (3)	***
5.11:	FIND THE UNION AND INTERSECTION OF TWO SETS OF NUMBERS (4)	63.2
GOAL 6:	SOLVE LINEAR EQUATIONS (31)	65.1
6.1:	FIND THE SOLUTION SET OF AN OPEN SENTENCE WHEN REPLACEMENT VALUES ARE GIVEN FOR THE VARIABLE (3)	***
6.2:	SOLVE A SIMPLE EQUATION BY USING THE ADDITION PROPERTY OF EQUALITY (4)	78.1
6.3:	SOLVE A SIMPLE EQUATION BY USING THE SUBTRACTION PROPERTY OF EQUALITY (2)	***
6.4:	SOLVE A SIMPLE EQUATION BY USING THE MULTIPLICATION PROPERTY OF EQUALITY (3)	***
6.5:	SOLVE A SIMPLE EQUATION BY USING THE DIVISION PROPERTY OF EQUALITY (2)	***
6.6:	SOLVE AN EQUATION BY USING MORE THAN ONE PROPERTY OF EQUALITY (2)	***
6.7:	SOLVE AN EQUATION WHICH CONTAINS SIMILAR TERMS (2)	***
6.8:	SOLVE AN EQUATION WHICH HAS THE VARIABLE IN BOTH MEMBERS (2)	***
6.9:	SOLVE 'AGE,' 'COIN,' AND 'INTEGER' PROBLEMS (2)	***
6.10:	SOLVE AN EQUATION IN WHICH THE NUMERICAL COEFFICIENT IS A FRACTION (4)	56.5
6.11:	SOLVE PROBLEMS INVOLVING PERCENTS (3)	***
6.12:	SOLVE 'PERCENT-MIXTURE,' 'INVESTMENT,' 'UNIFORM MOTION,' AND 'RATE-OF-WORK' PROBLEMS (2)	***
GOAL 7:	SOLVE LINEAR INEQUALITIES (4)	50.9
7.1:	FIND THE SOLUTION SET FOR A LINEAR INEQUALITY WHEN REPLACEMENT VALUES ARE GIVEN FOR THE VARIABLES (1)	***
7.2:	SOLVE A LINEAR INEQUALITY BY USING TRANSFORMATIONS (3)	***

NOTE:

THE NUMBER OF ITEMS IN EACH GOAL AREA IS DIRECTLY PROPORTIONAL TO THE NUMBER OF OBJECTIVES FOR THE GOAL. FIVE FORMS OF A 95-ITEM TEST WERE ADMINISTERED IN EVERY CLASSROOM. SIXTY OF THE 95 ITEMS WERE COMMON ACROSS THE FIVE FORMS (CORE). THE REMAINING 35 ITEMS VARIED BY FORM, SO THAT 235 ITEMS WERE MEASURED IN EVERY CLASSROOM. THE STARRED OBJECTIVES WILL BE REPORTED IN FUTURE YEARS.

TABLE 7, cont'd.

		STATE
GOAL 8:	UNDERSTAND AND SOLVE SYSTEMS OF LINEAR EQUATIONS (22)	48.1
8.1:	FIND THE SLOPE OF A NON-VERTICAL LINE GIVEN THE GRAPH OF A LINE, OR AN EQUATION OF THE LINE, OR TWO POINTS ON THE LINE (3)	***
8.2:	WRITE THE SLOPE-INTERCEPT FORM OF AN EQUATION OF A LINE (2)	***
8.3:	WRITE THE EQUATION OF A LINE GIVEN THE SLOPE AND ONE POINT ON THE LINE, OR TWO POINTS ON THE LINE (4)	31.8
8.4:	FIND THE SOLUTION SET OF OPEN SENTENCES IN TWO VARIABLES WHEN GIVEN REPLACEMENT SETS FOR THE VARIABLES (4)	55.1
8.5:	USE A GRAPH TO FIND THE SOLUTION OF A PAIR OF LINEAR EQUATIONS IN TWO VARIABLES (1)	***
8.6:	USE THE SUBSTITUTION METHOD TO FIND THE SOLUTION OF A PAIR OF LINEAR EQUATIONS IN TWO VARIABLES (4)	54.6
8.7:	USE THE ADDITION-OR-SUBTRACTION METHOD TO FIND THE SOLUTION OF A PAIR OF LINEAR EQUATIONS IN TWO VARIABLES (1)	***
8.8:	USE MULTIPLICATION WITH THE ADDITION-OR-SUBTRACTION METHOD TO SOLVE SYSTEMS OF LINEAR EQUATIONS (3)	***
GOAL 9:	PERFORM OPERATIONS WITH POLYNOMIALS (46)	67.7
9.1:	ADD POLYNOMIALS (2)	***
9.2:	SUBTRACT POLYNOMIALS (4)	54.6
9.3:	MULTIPLY MONOMIALS (2)	***
9.4:	FIND AN INDICATED POWER OF A MONOMIAL (3)	***
9.5:	MULTIPLY A POLYNOMIAL BY A MONOMIAL (2)	***
9.6:	MULTIPLY TWO POLYNOMIALS (1)	***
9.7:	FACTOR A MONOMIAL (3)	***
9.8:	DIVIDE TWO MONOMIALS (4)	62.1
9.9:	DIVIDE A POLYNOMIAL BY A MONOMIAL (2)	***
9.10:	DIVIDE A POLYNOMIAL BY A BINOMIAL (3)	***
9.11:	FIND A COMMON MONOMIAL FACTOR IN A POLYNOMIAL (4)	66.7
9.12:	FIND THE PRODUCT OF THE SUM AND DIFFERENCE OF TWO BINOMIALS (4)	69.0
9.13:	FACTOR THE DIFFERENCE OF TWO SQUARES (1)	***
9.14:	SQUARE A BINOMIAL WITHOUT USING LONG MULTIPLICATION (2)	***
9.15:	FACTOR A PERFECT SQUARE TRINOMIAL (2)	***
9.16:	FIND THE PRODUCT OF TWO BINOMIALS (2)	***
9.17:	FACTOR A QUADRATIC TRINOMIAL WHEN THE COEFFICIENT OF THE QUADRATIC TERM IS ONE (3)	***
9.18:	FACTOR A QUADRATIC TRINOMIAL WHEN THE COEFFICIENT OF THE QUADRATIC TERM IS NOT ONE (2)	***

NOTE:

THE NUMBER OF ITEMS IN EACH GOAL AREA IS DIRECTLY PROPORTIONAL TO THE NUMBER OF OBJECTIVES FOR THE GOAL. FIVE FORMS OF A 95-ITEM TEST WERE ADMINISTERED IN EVERY CLASSROOM. SIXTY OF THE 95 ITEMS WERE COMMON ACROSS THE FIVE FORMS (CORE). THE REMAINING 35 ITEMS VARIED BY FORM, SO THAT 235 ITEMS WERE MEASURED IN EVERY CLASSROOM. THE STARRED OBJECTIVES WILL BE REPORTED IN FUTURE YEARS.

TABLE 7, cont'd.

	STATE
GOAL 10: SOLVE QUADRATIC EQUATIONS (8)	43.1
10.1: SOLVE A SECOND DEGREE EQUATION WHEN ONE MEMBER IS IN FACTORED FORM AND THE OTHER MEMBER IS ZERO (3)	***
10.2: SOLVE A SECOND DEGREE EQUATION BY FACTORING (2)	***
10.3: USE FACTORING TO SOLVE A VERBAL PROBLEM (1)	***
10.4: SOLVE A QUADRATIC EQUATION THAT IS IN THE FORM PERFECT SQUARE = CONSTANT (2)	***
GOAL 11: PERFORM OPERATIONS WITH ALGEBRAIC FRACTIONS (23)	52.5
11.1: WRITE AN ALGEBRAIC FRACTION IN ITS SIMPLEST FORM (3)	***
11.2: SOLVE PROPORTIONS (2)	***
11.3: USE RATIOS AND PROPORTIONS TO SOLVE PROBLEMS (2)	***
11.4: MULTIPLY ALGEBRAIC FRACTIONS (2)	***
11.5: DIVIDE ALGEBRAIC FRACTIONS (3)	***
11.6: SIMPLIFY ALGEBRAIC EXPRESSIONS INVOLVING MULTIPLICATION AND DIVISION OF ALGEBRAIC FRACTIONS (3)	***
11.7: ADD AND SUBTRACT ALGEBRAIC FRACTIONS (4)	27.5
11.8: CHANGE A MIXED EXPRESSION TO AN ALGEBRAIC FRACTION AND A FRACTION TO A MIXED EXPRESSION (3)	***
11.9: SOLVE FRACTIONAL EQUATIONS (1)	***
GOAL 12: SIMPLIFY EXPRESSIONS WHICH CONTAIN RADICALS (5)	35.3
12.1: SIMPLIFY PRODUCTS AND QUOTIENTS OF RADICAL EXPRESSIONS (1)	***
12.2: SIMPLIFY SUMS AND DIFFERENCES OF RADICAL EXPRESSIONS (4)	35.4
PERCENT CORRECT ALL ITEMS (235)	65.5
AVERAGE SCORE ALL ITEMS (235)	153.9
NUMBER OF STUDENTS TESTED	59723

NOTE:

THE NUMBER OF ITEMS IN EACH GOAL AREA IS DIRECTLY PROPORTIONAL TO THE NUMBER OF OBJECTIVES FOR THE GOAL. FIVE FORMS OF A 95-ITEM TEST WERE ADMINISTERED IN EVERY CLASSROOM. SIXTY OF THE 95 ITEMS WERE COMMON ACROSS THE FIVE FORMS (CORE). THE REMAINING 35 ITEMS VARIED BY FORM, SO THAT 235 ITEMS WERE MEASURED IN EVERY CLASSROOM. THE STARRED OBJECTIVES WILL BE REPORTED IN FUTURE YEARS.

APPENDIX

Algebra I Core and Goal Performance in Educational Regions and Public School Systems

Table 8 presents average performance on the 60-item core test, the 235-item curriculum test, and the 12 goals of Algebra I for the eight educational regions.

Public school system average core and goal performance are given in Table 9. School systems are arranged by educational region.

Algebra I Box and Whisker Plots of Core Scores for Education Regions and Public School Systems

Figure 7 displays the distributions of core scores for eight educational regions using box and whisker plots. Public school system box and whisker plots are presented in Figures 8 through 15. See the interpretive legend in Figure 1 on page 4.

Algebra I Core Performance, Participation Rates, Yield, and Effective Yield for Public School Systems: 1986-1988

Table 10 presents participation rates, yield, effective yield, and performance on the equivalent 60-item core tests administered in all three years for the public school systems. School systems are arranged by educational region. Comparisons among school systems should always be sensitive to the fact that the social and demographic factors which are strongly related to differences in achievement are not distributed evenly across the state. These factors influence the yield indices as well as performance. For example, school systems in high socio-economic areas should have both high participation and performance, resulting in high yield and effective yield indices. One appropriate comparison might be among school systems with similar socio-economic characteristics. Another would involve comparing yield and effective yield indices for a school system across time to look for changes in participation and performance.

Characteristics of the Algebra I Students in Public School Systems

Select characteristics of all students in public school systems and all students taking Algebra I are listed in Table 11. The percent of a class is an estimate of the percent of an entire cohort or class of students who will eventually take Algebra I in their public school career. As shown in Table 1, in North Carolina it is estimated that 66.2 percent of a class of students will take Algebra I before they graduate from high school. Approximately 12.2 percent of the eighth-grade class took Algebra I in the 1987-88 school year. The percentages of eighth graders taking Algebra I vary among school systems: from 0 percent in 25 school systems to 20 percent or more in 16 school systems.

The ethnic distribution and parental education distribution within school systems and Algebra I classes also varies by school system. Statewide, black students and students with less educated parents appear to be underrepresented in Algebra I classes.

State Percentile Tables for 1986-1988

Tables 12-14 give summary statistics, the score distributions, and state percentiles for 1986, 1987, and 1988. The 1986 percentiles provide a baseline to which subsequent performance on the equivalent core tests can be compared.

TABLE 8

1988 Regional Summary Results for Algebra I: 60-Item Core Test and 235-Item Curriculum Test

STATE REPORT

GOALS

GOAL 1: USE THE LANGUAGE OF ALGEBRA
GOAL 2: USE THE STRUCTURAL PROPERTIES OF NUMBER SYSTEMS
GOAL 3: PERFORM OPERATIONS WITH RATIONAL NUMBERS
GOAL 4: LOCATE NUMBERS ON NUMBER LINE OR COORDINATE PLANE
GOAL 5: PERFORM OPERATIONS WITH REAL NUMBERS
GOAL 6: SOLVE LINEAR EQUATIONS
GOAL 7: SOLVE LINEAR INEQUALITIES
GOAL 8: UNDERSTAND AND SOLVE SYSTEMS OF LINEAR EQUATIONS
GOAL 9: PERFORM OPERATIONS WITH POLYNOMIALS
GOAL 10: SOLVE QUADRATIC EQUATIONS
GOAL 11: PERFORM OPERATIONS WITH ALGEBRAIC FRACTIONS
GOAL 12: SIMPLIFY EXPRESSIONS WHICH CONTAIN RADICALS

	NUMBER TESTED	GOAL 1	GOAL 2	GOAL 3	GOAL 4	GOAL 5	GOAL 6	GOAL 7	GOAL 8	GOAL 9	GOAL 10	GOAL 11	GOAL 12	AVG CORE	PCT CORE	AVG ALL ITEMS	PCT ALL ITEMS
NUMBER OF ITEMS		17	22	7	19	31	31	4	22	46	8	23	5	60	60	235	235
NORTHEAST	3161	74.4	78.7	76.3	72.7	78.0	65.5	52.1	48.3	68.8	43.4	53.1	39.7	39.8	66.3	155.6	66.2
SOUTHEAST	6495	74.2	77.6	75.6	71.7	76.6	64.2	49.0	47.6	67.3	41.9	52.1	34.7	39.0	65.0	152.7	65.0
CENTRAL	9817	76.8	80.5	77.9	74.4	78.4	67.4	54.7	52.2	70.6	46.2	55.1	39.8	40.7	67.9	160.1	68.1
SOUTH CENTRAL	7453	71.6	76.4	72.7	69.3	74.2	61.8	44.4	43.5	64.8	38.4	50.0	30.4	37.5	62.5	146.7	62.4
NORTH CENTRAL	10919	75.5	79.0	77.1	72.9	78.3	66.6	53.4	50.1	69.2	44.3	54.0	38.1	39.9	66.6	157.2	66.9
SOUTHWEST	10689	72.1	75.8	73.8	71.0	74.1	62.8	49.3	44.4	64.7	41.3	50.0	30.2	37.6	62.6	147.8	62.9
NORTHWEST	6080	74.6	79.3	75.4	73.3	77.7	65.7	51.5	48.5	68.7	44.0	53.2	33.9	39.4	65.7	155.6	66.2
WESTERN	5109	75.2	79.2	75.7	73.6	77.0	67.4	52.3	49.8	68.0	45.0	52.7	37.9	39.9	66.5	156.2	66.5

NOTE: THE NUMBER OF ITEMS IN EACH GOAL AREA IS DIRECTLY PROPORTIONAL TO THE NUMBER OF OBJECTIVES FOR THE GOAL. FIVE FORMS OF A 95-ITEM TEST WERE ADMINISTERED IN EVERY CLASSROOM. SIXTY OF THE 95 ITEMS WERE COMMON ACROSS THE FIVE FORMS (CORE). THE REMAINING 35 ITEMS VARIED BY FORM, SO THAT 235 ITEMS WERE MEASURED IN EVERY CLASSROOM. GOAL AREAS INCLUDE BOTH CORE AND VARIABLE ITEMS.

TABLE 9

1988 School System Summary Results for Algebra I: 60-Item Core Test and 235-Item Curriculum Test

REGION NORTHEAST

REGION REPORT

GOALS

GOAL 1: USE THE LANGUAGE OF ALGEBRA
GOAL 2: USE THE STRUCTURAL PROPERTIES OF NUMBER SYSTEMS
GOAL 3: PERFORM OPERATIONS WITH RATIONAL NUMBERS
GOAL 4: LOCATE NUMBERS ON NUMBER LINE OR COORDINATE PLANE
GOAL 5: PERFORM OPERATIONS WITH REAL NUMBERS
GOAL 6: SOLVE LINEAR EQUATIONS
GOAL 7: SOLVE LINEAR INEQUALITIES
GOAL 8: UNDERSTAND AND SOLVE SYSTEMS OF LINEAR EQUATIONS
GOAL 9: PERFORM OPERATIONS WITH POLYNOMIALS
GOAL 10: SOLVE QUADRATIC EQUATIONS
GOAL 11: PERFORM OPERATIONS WITH ALGEBRAIC FRACTIONS
GOAL 12: SIMPLIFY EXPRESSIONS WHICH CONTAIN RADICALS

	NUMBER TESTED	GOAL 1	GOAL 2	GOAL 3	GOAL 4	GOAL 5	GOAL 6	GOAL 7	GOAL 8	GOAL 9	GOAL 10	GOAL 11	GOAL 12	AVG CORE	PCT CORE	AVG ALL ITEMS	PCT ALL ITEMS
NUMBER OF ITEMS		17	18	5	16	30	32	5	22	49	11	25	5	60	60	235	235
BEAUFORT COUNTY	196	65.6	69.3	75.4	68.2	67.7	58.6	46.0	44.9	57.3	37.0	43.9	27.6	34.8	58.0	136.3	58.0
WASHINGTON CITY	230	73.1	76.9	75.9	73.4	76.7	65.3	59.1	47.8	64.6	39.6	52.0	45.8	38.9	64.8	152.6	65.0
BERTIE COUNTY	227	70.7	76.9	73.8	69.7	78.7	60.2	38.0	42.2	64.8	30.5	41.5	28.5	36.8	61.3	144.4	61.4
CAMDEN COUNTY	78	77.4	76.8	73.6	80.2	76.8	67.0	56.3	52.8	73.0	57.7	60.2	28.8	42.2	70.4	162.4	69.1
CHOWAN COUNTY	136	75.6	83.0	76.0	77.6	79.5	68.7	59.5	47.8	70.7	40.9	54.1	26.5	40.7	67.8	159.6	67.9
CURRITUCK COUNTY	112	87.5	88.8	87.2	79.3	87.9	78.9	71.0	66.9	81.2	58.8	60.4	44.1	46.8	78.0	183.0	77.9
DARE COUNTY	132	92.3	96.5	89.7	88.6	93.8	85.0	83.8	80.9	90.1	82.7	78.2	84.5	52.9	88.1	206.9	88.0
GATES COUNTY	88	67.9	82.7	77.1	76.3	77.2	65.5	54.0	44.2	70.3	43.3	60.6	48.0	38.9	64.9	157.9	67.2
HERTFORD COUNTY	222	69.6	75.0	73.4	67.3	76.2	62.8	49.6	41.7	66.9	39.1	50.7	38.2	38.4	64.1	148.0	63.0
HYDE COUNTY	39	66.0	66.4	69.7	69.1	70.8	58.2	35.6	37.0	61.8	38.0	42.7	15.7	35.5	59.1	135.4	57.6
MARTIN COUNTY	306	71.6	73.8	78.5	73.0	74.9	61.5	49.5	43.9	59.0	32.0	43.4	25.8	36.9	61.5	142.6	60.7
PASQUOTANK COUNTY	304	75.6	77.2	74.6	71.2	75.8	63.1	51.5	46.8	66.7	39.0	54.1	38.7	38.9	64.9	152.2	64.8
PERQUIMANS COUNTY	96	71.7	67.8	72.8	65.6	68.1	61.5	42.0	40.2	64.6	34.2	47.8	27.8	37.8	63.0	140.3	59.7
PITT COUNTY	783	79.1	83.9	78.8	73.6	83.0	69.0	53.0	50.4	75.6	50.4	58.8	49.8	42.1	70.2	166.5	70.9
TYRRELL COUNTY	44	73.7	76.4	66.8	70.9	77.5	68.9	40.1	59.4	74.2	40.4	56.2	36.1	42.1	70.2	160.3	68.2
WASHINGTON COUNTY	168	61.3	71.4	61.0	65.7	67.8	54.2	38.9	37.4	59.7	34.6	44.4	28.7	33.7	56.2	132.4	56.3

NOTE: THE NUMBER OF ITEMS IN EACH GOAL AREA IS DIRECTLY PROPORTIONAL TO THE NUMBER OF OBJECTIVES FOR THE GOAL. FIVE FORMS OF A 95-ITEM TEST WERE ADMINISTERED IN EVERY CLASSROOM. SIXTY OF THE 95 ITEMS WERE COMMON ACROSS THE FIVE FORMS (CORE). THE REMAINING 35 ITEMS VARIED BY FORM, SO THAT 235 ITEMS WERE MEASURED IN EVERY CLASSROOM. GOAL AREAS INCLUDE BOTH CORE AND VARIABLE ITEMS.

TABLE 9, cont'd.

NORTH CAROLINA END-OF-COURSE TESTING PROGRAM

ALGEBRA I --- 1988

REGION SOUTHEAST

REGION REPORT

GOALS

GOAL 1: USE THE LANGUAGE OF ALGEBRA
GOAL 2: USE THE STRUCTURAL PROPERTIES OF NUMBER SYSTEMS
GOAL 3: PERFORM OPERATIONS WITH RATIONAL NUMBERS
GOAL 4: LOCATE NUMBERS ON NUMBER LINE OR COORDINATE PLANE
GOAL 5: PERFORM OPERATIONS WITH REAL NUMBERS
GOAL 6: SOLVE LINEAR EQUATIONS
GOAL 7: SOLVE LINEAR INEQUALITIES
GOAL 8: UNDERSTAND AND SOLVE SYSTEMS OF LINEAR EQUATIONS
GOAL 9: PERFORM OPERATIONS WITH POLYNOMIALS
GOAL 10: SOLVE QUADRATIC EQUATIONS
GOAL 11: PERFORM OPERATIONS WITH ALGEBRAIC FRACTIONS
GOAL 12: SIMPLIFY EXPRESSIONS WHICH CONTAIN RADICALS

	NUMBER TESTED	GOAL 1	GOAL 2	GOAL 3	GOAL 4	GOAL 5	GOAL 6	GOAL 7	GOAL 8	GOAL 9	GOAL 10	GOAL 11	GOAL 12	AVG CORE	PCT CORE	AVG ALL ITEMS	PCT ALL ITEMS
NUMBER OF ITEMS		17	10	5	16	30	32	5	22	49	11	25	5	60	60	235	235
BRUNSWICK COUNTY	420	73.2	74.4	72.6	69.1	73.3	60.3	41.5	44.1	65.6	37.7	49.5	33.5	37.5	62.5	146.0	62.1
CARTERET COUNTY	367	82.8	85.3	81.1	77.9	82.1	73.0	62.1	61.2	76.0	55.4	58.6	43.9	43.6	72.7	172.4	73.4
NEW BERN-CRAVEN	759	73.8	78.1	72.6	72.3	76.2	64.2	48.6	43.9	63.9	42.0	49.2	35.3	38.1	63.6	149.5	63.6
DUPLIN COUNTY	403	71.4	79.1	73.9	73.0	74.3	63.0	51.6	46.7	66.3	38.5	54.5	30.6	38.6	64.3	151.1	64.3
GREENE COUNTY	136	78.4	78.5	70.5	66.5	74.8	67.6	39.3	46.7	67.9	48.6	50.8	25.5	38.6	64.4	152.3	64.8
JONES COUNTY	97	62.6	65.9	71.1	71.3	72.3	52.5	43.4	36.3	61.3	24.7	45.7	30.0	35.7	59.6	134.2	57.1
LENOIR COUNTY	356	69.8	74.0	76.8	69.7	72.7	58.4	42.6	44.6	63.0	34.8	49.5	27.2	36.4	60.7	143.4	61.0
KINSTON CITY	236	78.2	85.7	82.8	78.3	84.3	69.4	59.1	52.9	77.1	58.6	61.1	59.5	42.7	71.2	170.2	72.4
NEW HANOVER COUNT	1150	76.1	76.6	76.9	73.5	77.0	65.1	48.7	51.0	69.2	41.6	53.9	33.3	39.9	66.6	155.6	66.2
ONSLOW COUNTY	821	78.5	79.4	82.5	74.1	79.3	70.6	53.3	49.6	70.2	44.0	51.6	35.0	40.9	68.2	159.6	67.9
PAMLICO COUNTY	103	76.4	79.7	73.7	70.0	80.8	62.8	48.0	45.8	69.5	41.2	53.1	54.8	38.7	64.4	155.7	66.3
PENDER COUNTY	253	72.4	77.6	68.2	71.4	75.8	60.1	54.4	46.4	65.0	42.4	49.3	38.2	37.1	61.8	148.7	63.3
SAMPSON COUNTY	300	63.6	71.4	67.9	63.4	69.9	56.6	38.8	39.4	59.3	35.2	45.3	28.8	35.0	58.3	134.7	57.3
CLINTON CITY	145	82.4	86.3	84.6	80.2	84.4	69.8	66.9	60.2	76.3	57.8	63.3	48.5	43.8	73.0	174.6	74.3
WAYNE COUNTY	684	72.1	77.2	73.9	70.0	76.5	63.6	44.8	46.6	65.9	40.4	53.5	28.9	38.8	64.7	150.5	64.1
GOLDSBORO CITY	265	64.3	71.7	69.9	64.8	71.2	53.7	42.1	37.1	60.2	29.7	44.2	31.1	34.6	57.7	134.3	57.1

NOTE: THE NUMBER OF ITEMS IN EACH GOAL AREA IS DIRECTLY PROPORTIONAL TO THE NUMBER OF OBJECTIVES FOR THE GOAL. FIVE FORMS OF A 95-ITEM TEST WERE ADMINISTERED IN EVERY CLASSROOM. SIXTY OF THE 95 ITEMS WERE COMMON ACROSS THE FIVE FORMS (CORE). THE REMAINING 35 ITEMS VARIED BY FORM, SO THAT 235 ITEMS WERE MEASURED IN EVERY CLASSROOM. GOAL AREAS INCLUDE BOTH CORE AND VARIABLE ITEMS.

TABLE 9, cont'd.

NORTH CAROLINA END-OF-COURSE TESTING PROGRAM

ALGEBRA I --- 1988

REGION CENTRAL

REGION REPORT

GOALS

GOAL 1: USE THE LANGUAGE OF ALGEBRA
GOAL 2: USE THE STRUCTURAL PROPERTIES OF NUMBER SYSTEMS
GOAL 3: PERFORM OPERATIONS WITH RATIONAL NUMBERS
GOAL 4: LOCATE NUMBERS ON NUMBER LINE OR COORDINATE PLANE
GOAL 5: PERFORM OPERATIONS WITH REAL NUMBERS
GOAL 6: SOLVE LINEAR EQUATIONS
GOAL 7: SOLVE LINEAR INEQUALITIES
GOAL 8: UNDERSTAND AND SOLVE SYSTEMS OF LINEAR EQUATIONS
GOAL 9: PERFORM OPERATIONS WITH POLYNOMIALS
GOAL 10: SOLVE QUADRATIC EQUATIONS
GOAL 11: PERFORM OPERATIONS WITH ALGEBRAIC FRACTIONS
GOAL 12: SIMPLIFY EXPRESSIONS WHICH CONTAIN RADICALS

	NUMBER TESTED	GOAL 1	GOAL 2	GOAL 3	GOAL 4	GOAL 5	GOAL 6	GOAL 7	GOAL 8	GOAL 9	GOAL 10	GOAL 11	GOAL 12	AVG CORE	PCT CORE	AVG ALL ITEMS	PCT ALL ITEMS
NUMBER OF ITEMS		17	10	5	16	30	32	5	22	49	11	25	5	60	60	235	235
DURHAM COUNTY	1067	80.3	80.3	79.6	74.7	76.5	70.2	53.2	53.2	71.3	49.8	57.9	40.4	41.0	68.4	162.5	69.1
DURHAM CITY	432	57.6	62.5	64.9	63.3	68.7	48.3	39.6	33.3	53.3	27.3	39.3	24.3	31.6	52.7	122.2	52.0
EDGECOMBE COUNTY	245	69.2	77.0	73.9	65.9	71.7	60.8	43.3	40.4	65.2	34.0	50.9	23.9	36.4	60.7	143.7	61.1
TARBORO CITY	133	78.9	84.8	85.5	74.3	80.3	72.0	55.0	54.3	76.5	47.5	57.9	34.5	42.6	71.0	167.6	71.3
FRANKLIN COUNTY	258	73.7	81.6	75.3	74.4	78.7	66.3	50.6	46.2	69.1	43.2	52.5	38.0	39.8	66.4	156.2	66.5
FRANKLINTON CITY	68	62.9	71.9	66.4	68.4	67.1	58.5	39.8	32.9	57.8	47.3	41.0	29.5	33.6	56.1	130.3	55.5
GRANVILLE COUNTY	335	68.0	75.1	72.0	66.5	75.1	59.3	47.5	40.6	63.0	35.9	46.5	28.8	36.1	60.2	142.3	60.5
HALIFAX COUNTY	407	56.1	60.7	49.9	57.0	60.2	44.4	32.3	30.2	48.7	24.3	36.7	23.6	28.9	48.2	111.5	47.5
ROANOKE RPDS CITY	190	78.3	79.0	78.3	74.8	74.7	69.7	55.8	53.1	66.7	44.2	55.6	37.3	40.2	66.9	157.9	67.2
WELDON CITY	69	57.6	65.8	62.3	64.1	61.6	43.3	33.7	30.8	50.7	12.7	35.8	19.2	30.1	50.1	115.8	48.9
JOHNSTON COUNTY	777	77.7	82.3	84.2	77.8	80.8	68.2	57.8	52.9	70.5	46.3	49.2	30.1	41.3	68.8	161.1	68.5
NASH COUNTY	632	76.9	77.8	74.7	70.8	75.5	65.7	50.0	50.2	68.4	42.0	53.9	29.8	39.6	65.9	154.4	65.7
ROCKY MOUNT CITY	216	82.4	83.9	78.5	75.8	82.6	73.7	63.2	57.1	77.2	53.0	58.8	47.1	43.4	72.4	171.5	73.0
NORTHAMPTON COUNT	245	64.4	68.2	61.1	63.9	69.3	54.6	45.3	41.7	58.8	27.2	46.1	22.3	34.5	57.6	132.7	56.5
VANCE COUNTY	368	73.6	79.0	74.7	69.3	73.7	63.3	55.5	44.5	66.1	39.6	47.5	18.8	37.9	63.2	148.2	63.1
WAKE COUNTY	3628	83.0	86.1	83.9	80.2	84.1	74.1	62.1	60.2	77.8	54.4	62.2	53.0	44.6	74.4	176.0	74.9
WARREN COUNTY	148	74.7	83.4	66.7	69.0	72.9	66.4	42.7	48.5	69.6	36.4	50.5	14.1	38.7	64.5	151.7	64.5
WILSON COUNTY	607	77.1	83.1	80.3	75.5	81.9	68.6	57.4	57.1	72.6	50.4	58.1	47.0	42.1	70.1	166.1	70.7

NOTE: THE NUMBER OF ITEMS IN EACH GOAL AREA IS DIRECTLY PROPORTIONAL TO THE NUMBER OF OBJECTIVES FOR THE GOAL. FIVE FORMS OF A 95-ITEM TEST WERE ADMINISTERED IN EVERY CLASSROOM. SIXTY OF THE 95 ITEMS WERE COMMON ACROSS THE FIVE FORMS (CORE). THE REMAINING 35 ITEMS VARIED BY FORM, SO THAT 235 ITEMS WERE MEASURED IN EVERY CLASSROOM. GOAL AREAS INCLUDE BOTH CORE AND VARIABLE ITEMS.

TABLE 9, cont'd.

NORTH CAROLINA END-OF-COURSE TESTING PROGRAM

ALGEBRA I --- 1988

REGION SOUTH CENTRAL

REGION REPORT

GOALS

GOAL 1: USE THE LANGUAGE OF ALGEBRA
GOAL 2: USE THE STRUCTURAL PROPERTIES OF NUMBER SYSTEMS
GOAL 3: PERFORM OPERATIONS WITH RATIONAL NUMBERS
GOAL 4: LOCATE NUMBERS ON NUMBER LINE OR COORDINATE PLANE
GOAL 5: PERFORM OPERATIONS WITH REAL NUMBERS
GOAL 6: SOLVE LINEAR EQUATIONS
GOAL 7: SOLVE LINEAR INEQUALITIES
GOAL 8: UNDERSTAND AND SOLVE SYSTEMS OF LINEAR EQUATIONS
GOAL 9: PERFORM OPERATIONS WITH POLYNOMIALS
GOAL 10: SOLVE QUADRATIC EQUATIONS
GOAL 11: PERFORM OPERATIONS WITH ALGEBRAIC FRACTIONS
GOAL 12: SIMPLIFY EXPRESSIONS WHICH CONTAIN RADICALS

	NUMBER TESTED	GOAL 1	GOAL 2	GOAL 3	GOAL 4	GOAL 5	GOAL 6	GOAL 7	GOAL 8	GOAL 9	GOAL 10	GOAL 11	GOAL 12	AVG CORE	PCT CORE	AVG ALL ITEMS	PCT ALL ITEMS
NUMBER OF ITEMS		17	18	5	16	30	32	5	22	49	11	25	5	60	60	235	235
BLADEN COUNTY	345	63.4	71.0	68.9	66.8	70.2	54.0	39.1	35.4	57.9	30.5	43.2	25.4	33.8	56.3	132.1	56.2
COLUMBUS COUNTY	362	71.2	71.7	71.6	67.3	71.2	59.5	44.6	44.1	62.4	40.4	47.2	41.1	36.7	61.1	142.5	60.6
WHITEVILLE CITY	160	77.8	80.0	81.1	69.2	78.6	63.0	42.1	44.9	64.7	35.1	51.6	31.1	38.4	64.0	151.1	64.3
CUMBERLAND COUNTY	2625	72.1	76.2	71.8	69.4	72.9	63.0	42.7	44.5	65.4	37.5	50.0	28.6	37.7	62.9	146.9	62.5
HARNETT COUNTY	527	75.5	81.8	77.1	71.3	79.3	66.4	53.0	42.6	68.0	50.6	54.4	41.7	39.0	65.0	156.3	66.5
HOKE COUNTY	202	76.8	81.3	83.1	72.4	79.4	66.0	48.7	54.2	73.1	41.4	52.5	34.9	41.4	68.9	160.3	68.2
LEE COUNTY	445	77.5	83.3	78.5	74.5	82.4	65.6	48.7	46.4	73.4	48.6	58.2	45.5	40.7	67.9	162.5	69.1
MONTGOMERY COUNTY	308	74.2	79.3	72.9	69.2	79.3	61.9	49.1	45.9	68.2	39.3	57.2	29.3	38.5	64.2	153.3	65.2
MOORE COUNTY	465	72.5	79.4	71.6	68.9	74.2	65.3	44.4	43.4	64.9	36.3	50.8	27.9	37.4	62.3	148.3	63.1
RICHMOND COUNTY	501	66.0	76.0	68.4	69.0	71.0	59.5	48.5	39.5	61.0	32.1	45.3	23.3	35.9	59.9	139.2	59.2
ROBESON COUNTY	515	67.0	70.8	64.6	65.2	69.6	58.8	39.0	42.9	60.5	30.1	45.3	23.4	35.4	59.0	136.5	58.1
FAIRMONT CITY	121	58.1	68.8	69.1	64.0	71.7	50.0	25.3	32.5	58.6	35.8	49.2	22.2	33.1	55.2	130.1	55.4
LUMBERTON CITY	245	72.4	72.7	72.6	67.2	72.3	58.7	37.6	45.6	63.7	35.7	47.0	26.7	37.0	61.6	142.6	60.7
RED SPRINGS	99	57.3	57.2	64.0	61.7	66.7	46.3	28.5	26.8	42.5	21.5	33.8	22.4	27.8	46.4	110.8	47.1
SAINT PAULS CITY	54	74.9	79.5	80.7	72.7	77.4	65.4	49.2	52.2	67.5	55.7	54.3	30.3	41.6	69.4	156.9	66.8
SCOTLAND COUNTY	479	74.3	78.7	80.2	72.0	76.8	62.1	52.7	44.2	66.4	44.1	52.7	31.3	39.0	64.9	151.9	64.6

NOTE: THE NUMBER OF ITEMS IN EACH GOAL AREA IS DIRECTLY PROPORTIONAL TO THE NUMBER OF OBJECTIVES FOR THE GOAL. FIVE FORMS OF A 95-ITEM TEST WERE ADMINISTERED IN EVERY CLASSROOM. SIXTY OF THE 95 ITEMS WERE COMMON ACROSS THE FIVE FORMS (CORE). THE REMAINING 35 ITEMS VARIED BY FORM, SO THAT 235 ITEMS WERE MEASURED IN EVERY CLASSROOM. GOAL AREAS INCLUDE BOTH CORE AND VARIABLE ITEMS.

TABLE 9, cont'd.

NORTH CAROLINA END-OF-COURSE TESTING PROGRAM

ALGEBRA I --- 1988

REGION NORTH CENTRAL

REGION REPORT

GOALS

GOAL 1: USE THE LANGUAGE OF ALGEBRA
GOAL 2: USE THE STRUCTURAL PROPERTIES OF NUMBER SYSTEMS
GOAL 3: PERFORM OPERATIONS WITH RATIONAL NUMBERS
GOAL 4: LOCATE NUMBERS ON NUMBER LINE OR COORDINATE PLANE
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GOAL 6: SOLVE LINEAR EQUATIONS
GOAL 7: SOLVE LINEAR INEQUALITIES
GOAL 8: UNDERSTAND AND SOLVE SYSTEMS OF LINEAR EQUATIONS
GOAL 9: PERFORM OPERATIONS WITH POLYNOMIALS
GOAL 10: SOLVE QUADRATIC EQUATIONS
GOAL 11: PERFORM OPERATIONS WITH ALGEBRAIC FRACTIONS
GOAL 12: SIMPLIFY EXPRESSIONS WHICH CONTAIN RADICALS

	NUMBER TESTED	GOAL 1	GOAL 2	GOAL 3	GOAL 4	GOAL 5	GOAL 6	GOAL 7	GOAL 8	GOAL 9	GOAL 10	GOAL 11	GOAL 12	AVG CORE	PCT CORE	AVG ALL ITEMS	PCT ALL ITEMS
NUMBER OF ITEMS		17	10	5	16	30	32	5	22	49	11	25	5	60	60	235	235
ALAMANCE COUNTY	555	75.1	79.9	73.9	72.6	78.5	66.4	51.2	47.6	69.3	41.1	51.9	32.0	39.9	66.5	155.5	66.2
BURLINGTON CITY	381	72.5	79.6	80.1	78.5	79.6	64.1	51.7	50.7	70.0	45.9	53.7	45.9	40.7	67.9	158.7	67.5
CASWELL COUNTY	225	65.1	69.6	70.9	68.4	74.1	54.8	51.2	36.9	58.9	34.5	43.1	37.3	34.9	58.1	136.1	57.9
CHATHAM COUNTY	296	79.2	83.6	81.7	74.9	81.1	70.2	66.9	53.1	71.4	49.4	55.2	41.5	41.5	69.2	164.6	70.1
DAVIDSON COUNTY	903	67.5	72.9	72.5	69.8	75.9	58.4	48.9	40.8	63.1	37.6	50.5	26.4	36.3	60.6	143.4	61.0
LEXINGTON CITY	161	68.3	74.8	72.3	68.7	74.2	56.6	39.7	38.8	62.3	33.6	48.3	27.9	36.6	61.1	140.7	59.9
THOMASVILLE CITY	146	71.2	80.6	81.7	73.9	77.8	62.8	46.6	47.8	69.5	40.4	54.0	35.5	39.3	65.5	154.9	65.9
FORSYTH COUNTY	2077	79.3	82.2	81.2	74.1	80.1	70.9	60.6	56.1	73.4	49.8	59.1	45.0	42.1	70.2	166.5	70.9
GUILFORD COUNTY	1366	79.4	80.5	80.5	76.1	80.0	69.6	55.3	53.1	70.4	44.3	54.0	40.7	41.0	68.4	161.9	68.9
GREENSBORO CITY	1422	72.9	76.8	74.4	68.5	77.4	62.9	43.6	48.2	66.6	39.3	51.3	32.1	38.4	63.9	150.5	64.1
HIGH POINT CITY	354	79.8	81.3	76.5	74.2	78.8	69.5	49.8	49.8	71.9	44.8	54.3	44.9	40.8	68.1	161.2	68.6
ORANGE COUNTY	316	73.8	75.4	74.6	70.6	74.0	64.2	49.1	46.0	65.1	35.4	47.3	41.8	38.2	63.7	148.4	63.2
CHAPEL HILL CITY	346	90.8	92.8	85.5	86.7	86.6	84.4	77.1	75.0	87.3	79.9	75.1	79.0	49.8	82.9	198.7	84.5
PERSON COUNTY	318	69.3	74.8	74.1	70.2	73.5	64.6	48.6	45.6	64.5	42.2	51.2	42.2	37.7	62.8	148.4	63.2
RANDOLPH COUNTY	635	74.0	76.4	73.9	71.1	76.7	64.3	53.3	45.6	66.9	38.9	51.7	28.2	38.1	63.6	151.2	64.3
ASHEBORO CITY	202	78.5	81.0	82.2	78.7	83.2	68.2	58.7	50.3	69.8	50.6	56.6	32.3	40.6	67.6	161.5	68.7
ROCKINGHAM COUNTY	259	72.2	79.7	76.0	72.2	77.8	65.8	55.0	41.5	64.1	41.0	49.6	34.8	38.7	64.4	150.6	64.1
EDEN CITY	232	75.7	78.0	70.1	75.5	77.9	68.2	50.6	55.7	67.1	51.7	51.7	44.5	40.6	67.7	159.0	67.2
WEST. ROCKINGHAM	221	72.6	74.4	74.8	71.2	75.8	64.5	46.0	51.4	67.4	41.1	52.2	28.4	39.1	65.2	151.8	64.6
REIDSVILLE CITY	209	69.7	74.9	70.8	69.3	73.1	63.2	53.1	41.0	63.3	29.9	44.5	26.3	37.0	61.7	142.9	60.8
STOKES COUNTY	295	78.7	82.3	74.1	72.8	76.4	69.8	47.6	47.5	73.6	49.5	56.2	24.3	40.0	66.6	160.1	68.1

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TABLE 9, cont'd.

NORTH CAROLINA END-OF-COURSE TESTING PROGRAM

ALGEBRA I --- 1988

REGION SOUTHWEST

REGION REPORT

GOALS

GOAL 1: USE THE LANGUAGE OF ALGEBRA
GOAL 2: USE THE STRUCTURAL PROPERTIES OF NUMBER SYSTEMS
GOAL 3: PERFORM OPERATIONS WITH RATIONAL NUMBERS
GOAL 4: LOCATE NUMBERS ON NUMBER LINE OR COORDINATE PLANE
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GOAL 6: SOLVE LINEAR EQUATIONS
GOAL 7: SOLVE LINEAR INEQUALITIES
GOAL 8: UNDERSTAND AND SOLVE SYSTEMS OF LINEAR EQUATIONS
GOAL 9: PERFORM OPERATIONS WITH POLYNOMIALS
GOAL 10: SOLVE QUADRATIC EQUATIONS
GOAL 11: PERFORM OPERATIONS WITH ALGEBRAIC FRACTIONS
GOAL 12: SIMPLIFY EXPRESSIONS WHICH CONTAIN RADICALS

	NUMBER TESTED	GOAL 1	GOAL 2	GOAL 3	GOAL 4	GOAL 5	GOAL 6	GOAL 7	GOAL 8	GOAL 9	GOAL 10	GOAL 11	GOAL 12	AVG CORE	PCT CORE	AVG ALL ITEMS	PCT ALL ITEMS
NUMBER OF ITEMS		17	18	5	16	30	32	5	22	49	11	25	5	60	60	235	235
ANSON COUNTY	255	63.1	76.0	62.9	66.6	69.8	53.1	41.9	38.6	64.1	33.4	52.4	20.4	34.8	58.1	138.0	58.7
CABARRUS COUNTY	863	77.2	81.8	73.2	73.2	77.1	67.5	56.4	44.1	68.3	47.2	51.9	35.6	39.3	65.4	155.8	66.3
KANNAPOLIS CITY	282	64.9	75.7	70.2	70.3	71.1	55.1	33.7	40.4	59.2	37.3	45.6	23.8	34.0	56.7	137.2	58.4
CLEVELAND COUNTY	374	74.2	78.9	76.9	75.1	76.1	64.8	55.1	49.9	68.5	47.9	56.1	51.4	39.9	66.5	157.3	66.9
KINGS MTN. CITY	173	74.9	76.1	76.9	74.4	74.2	64.4	44.4	48.3	66.0	37.4	53.1	36.7	38.6	64.4	151.7	64.6
SHELBY CITY	184	71.2	79.3	76.1	69.8	77.0	63.2	41.9	47.0	62.6	46.3	45.0	22.8	37.7	62.8	147.6	62.8
GASTON COUNTY	1723	70.0	72.7	71.0	67.1	72.9	59.3	43.4	40.9	62.4	37.5	48.7	26.2	35.6	59.4	141.5	60.2
LINCOLN COUNTY	497	68.9	76.2	72.9	69.0	70.9	62.9	46.6	39.6	63.6	39.9	47.9	26.3	36.3	60.5	143.5	61.1
MECKLENBURG COUNT	4260	71.9	74.4	74.8	71.6	73.0	62.7	51.2	45.5	63.9	40.7	49.8	28.6	37.6	62.6	147.1	62.6
ROWAN COUNTY	726	69.6	75.0	73.1	71.9	74.5	61.7	47.2	44.9	62.4	41.0	47.4	25.4	37.3	62.2	145.2	61.8
SALISBURY CITY	126	75.1	74.2	81.6	75.2	76.0	64.3	53.6	51.7	66.6	41.5	50.9	45.3	39.8	66.3	154.0	65.5
STANLY COUNTY	370	77.1	79.5	71.8	74.1	79.6	67.3	47.8	46.4	70.5	41.2	53.2	37.0	39.9	66.5	157.2	66.9
ALBEMARLE CITY	122	78.9	77.9	73.6	71.3	76.3	69.8	63.9	48.1	68.4	44.4	52.7	22.1	40.1	66.8	156.0	66.4
UNION COUNTY	594	78.2	81.2	79.7	73.9	79.4	69.7	57.8	46.8	71.1	51.4	52.3	42.7	40.8	68.0	160.6	68.3
MONROE CITY	140	71.7	74.5	76.6	64.2	73.8	59.9	39.2	45.3	64.4	38.3	49.5	33.6	36.6	61.0	144.9	61.6

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TABLE 9, cont'd.

NORTH CAROLINA END-OF-COURSE TESTING PROGRAM

ALGEBRA I --- 1988

REGION NORTHWEST

REGION REPORT

GOALS

GOAL 1: USE THE LANGUAGE OF ALGEBRA
GOAL 2: USE THE STRUCTURAL PROPERTIES OF NUMBER SYSTEMS
GOAL 3: PERFORM OPERATIONS WITH RATIONAL NUMBERS
GOAL 4: LOCATE NUMBERS ON NUMBER LINE OR COORDINATE PLANE
GOAL 5: PERFORM OPERATIONS WITH REAL NUMBERS
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GOAL 7: SOLVE LINEAR INEQUALITIES
GOAL 8: UNDERSTAND AND SOLVE SYSTEMS OF LINEAR EQUATIONS
GOAL 9: PERFORM OPERATIONS WITH POLYNOMIALS
GOAL 10: SOLVE QUADRATIC EQUATIONS
GOAL 11: PERFORM OPERATIONS WITH ALGEBRAIC FRACTIONS
GOAL 12: SIMPLIFY EXPRESSIONS WHICH CONTAIN RADICALS

	NUMBER TESTED	GOAL 1	GOAL 2	GOAL 3	GOAL 4	GOAL 5	GOAL 6	GOAL 7	GOAL 8	GOAL 9	GOAL 10	GOAL 11	GOAL 12	AVG CORE	PCT CORE	AVG ALL ITEMS	PCT ALL ITEMS
NUMBER OF ITEMS		17	18	5	16	30	32	5	22	49	11	25	5	60	60	235	235
ALEXANDER COUNTY	329	71.4	76.2	68.5	71.2	75.3	58.9	45.6	43.4	64.5	33.5	50.7	25.1	36.7	61.2	145.5	61.9
ALLEGHANY COUNTY	112	59.4	68.6	69.3	67.4	68.6	52.8	44.2	33.3	54.8	34.7	48.4	29.3	32.7	54.5	129.9	55.3
ASHE COUNTY	188	79.7	83.8	79.0	72.8	82.0	72.4	54.4	53.9	73.2	45.3	60.6	55.6	42.0	69.9	167.3	71.2
AVERY COUNTY	160	66.6	73.3	56.3	71.1	73.2	52.7	44.5	40.9	55.6	39.7	47.9	28.6	34.2	57.1	135.9	57.8
BURKE COUNTY	623	75.8	80.9	75.3	73.8	78.3	66.4	55.1	50.4	71.2	41.4	53.3	29.8	40.5	67.6	158.0	67.2
CALDWELL COUNTY	575	76.4	79.7	82.1	75.0	80.7	68.4	53.9	47.1	70.9	46.0	53.1	41.3	40.7	67.9	159.8	68.0
CATAWBA COUNTY	617	82.5	87.8	83.4	79.1	82.9	74.9	61.3	56.7	77.5	53.7	60.9	48.9	43.6	72.7	174.4	74.2
HICKORY CITY	347	78.1	80.6	83.7	74.8	78.1	69.6	57.5	54.1	73.7	39.0	50.5	33.6	41.9	69.9	161.4	68.7
NEWTON CITY	160	79.4	80.4	81.3	78.4	79.7	68.8	52.2	47.0	68.0	45.1	54.2	31.8	39.9	66.5	159.2	67.7
DAVIE COUNTY	290	71.4	78.7	75.8	71.5	77.1	66.5	49.1	49.5	69.8	47.9	52.8	34.1	39.7	66.2	155.5	66.2
IREDELL COUNTY	743	65.8	68.3	66.8	66.1	72.4	55.6	37.1	41.9	58.4	34.2	45.7	31.3	34.4	57.4	135.5	57.7
MOORESVILLE CITY	110	77.3	81.2	77.1	75.0	79.3	71.5	60.4	52.8	66.8	52.1	54.3	25.3	39.9	66.5	160.1	68.1
STATESVILLE CITY	168	74.2	79.6	72.1	69.8	77.6	63.8	53.7	46.0	73.0	47.7	56.3	44.3	40.2	66.9	157.1	66.9
SURRY COUNTY	454	75.2	82.8	74.8	77.8	80.5	68.3	60.6	52.9	74.1	51.1	57.8	28.9	41.0	68.4	164.1	69.8
ELKIN CITY	74	79.1	77.3	76.8	78.0	75.9	68.7	54.9	57.3	70.1	43.7	53.6	27.3	40.8	68.0	159.7	67.9
MOUNT AIRY CITY	102	81.4	83.9	86.3	76.2	81.7	69.7	60.1	52.3	75.6	56.4	55.0	39.8	42.8	71.4	167.6	71.3
WATAUGA COUNTY	264	83.2	87.9	78.8	79.8	78.2	77.2	61.7	62.2	79.6	57.4	62.9	24.0	44.8	74.7	175.3	74.6
WILKES COUNTY	515	72.2	75.7	71.4	69.9	73.6	61.1	45.6	37.4	59.7	39.4	47.4	28.4	35.8	59.6	142.8	60.4
YADKIN COUNTY	249	71.8	82.4	74.0	71.3	79.0	64.5	37.6	48.1	67.5	43.2	52.2	27.2	38.6	64.4	153.5	65.3

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NORTH CAROLINA END-OF-COURSE TESTING PROGRAM

ALGEBRA I --- 1988

REGION WESTERN

REGION REPORT

GOALS

GOAL 1: USE THE LANGUAGE OF ALGEBRA
GOAL 2: USE THE STRUCTURAL PROPERTIES OF NUMBER SYSTEMS
GOAL 3: PERFORM OPERATIONS WITH RATIONAL NUMBERS
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	NUMBER TESTED	GOAL 1	GOAL 2	GOAL 3	GOAL 4	GOAL 5	GOAL 6	GOAL 7	GOAL 8	GOAL 9	GOAL 10	GOAL 11	GOAL 12	AVG CORE	PCT CORE	AVG ALL ITEMS	PCT ALL ITEMS
NUMBER OF ITEMS		17	18	5	16	30	32	5	22	49	11	25	5	60	60	235	235
BUNCOMBE COUNTY	1342	76.0	79.9	77.8	74.6	77.7	68.8	53.0	52.1	68.0	45.6	53.0	38.5	40.5	67.5	158.2	67.3
ASHEVILLE CITY	212	80.9	82.4	79.6	75.0	77.8	71.3	61.5	55.2	73.1	55.2	59.0	47.4	42.9	71.5	166.5	70.9
CHEROKEE COUNTY	185	79.7	81.2	76.3	74.8	80.2	72.6	59.6	56.5	69.0	53.5	58.4	49.0	41.9	69.8	165.0	70.2
CLAY COUNTY	63	79.9	77.0	80.5	73.2	72.0	70.0	44.9	49.0	69.2	41.5	49.6	31.9	39.9	66.4	155.1	66.0
GRAHAM COUNTY	94	70.2	71.2	69.8	74.7	77.1	59.8	52.5	46.9	63.4	44.5	52.8	33.5	37.5	62.4	148.1	63.0
HAYWOOD COUNTY	480	74.2	77.2	73.5	73.2	74.0	67.6	52.7	47.6	67.6	40.1	49.2	38.1	39.0	65.0	152.6	65.0
HENDERSON COUNTY	415	79.7	80.9	77.6	76.8	77.1	71.2	54.1	53.4	73.4	49.2	56.4	44.1	41.6	69.4	164.2	69.9
HENDERSNVLLE CITY	138	74.6	73.6	65.9	72.4	75.9	60.7	36.1	49.1	66.9	37.3	52.5	30.2	38.2	63.7	149.1	63.5
JACKSON COUNTY	202	73.5	76.4	71.4	71.7	74.1	63.4	41.5	46.5	66.6	45.2	51.2	23.6	38.2	63.7	149.6	63.7
MACON COUNTY	183	73.6	81.6	77.9	74.2	79.6	66.6	57.6	50.9	68.8	49.7	54.8	35.5	39.7	66.2	158.8	67.6
MADISON COUNTY	129	74.1	80.8	82.4	73.1	81.0	66.5	51.3	53.0	70.0	46.9	51.6	36.9	40.2	67.0	158.9	67.6
MCDOWELL COUNTY	406	74.1	81.0	77.4	73.6	79.1	64.0	51.1	45.0	63.8	39.3	49.8	34.5	39.1	65.2	151.8	64.6
MITCHELL COUNTY	192	64.3	69.3	62.9	69.5	69.6	59.3	44.4	42.3	54.4	37.2	43.1	29.3	34.4	57.4	134.2	57.1
POLK COUNTY	86	66.0	72.3	68.9	69.0	75.6	63.2	39.0	45.1	58.1	32.4	41.6	41.0	36.2	60.3	140.5	59.8
TRYON CITY	54	68.5	75.5	66.9	73.6	72.1	62.9	51.5	40.4	61.2	40.0	42.4	55.1	37.1	61.9	143.6	61.1
RUTHERFORD COUNTY	442	76.5	82.9	78.7	70.7	78.9	68.5	53.4	45.0	71.9	44.7	56.2	42.7	40.7	67.0	159.0	68.0
SWAIN COUNTY	115	73.6	80.6	74.9	70.9	77.0	69.0	51.5	46.2	65.9	56.4	53.4	26.6	38.4	64.0	154.9	65.9
TRANSYLVANIA COUN	255	76.3	82.5	77.6	78.3	77.0	72.0	61.0	57.4	75.0	49.6	58.4	39.3	43.1	71.9	166.9	71.0
YANCEY COUNTY	116	72.5	71.6	66.5	66.9	75.4	59.0	40.0	42.4	61.0	37.3	45.1	24.3	36.5	60.0	141.4	60.2

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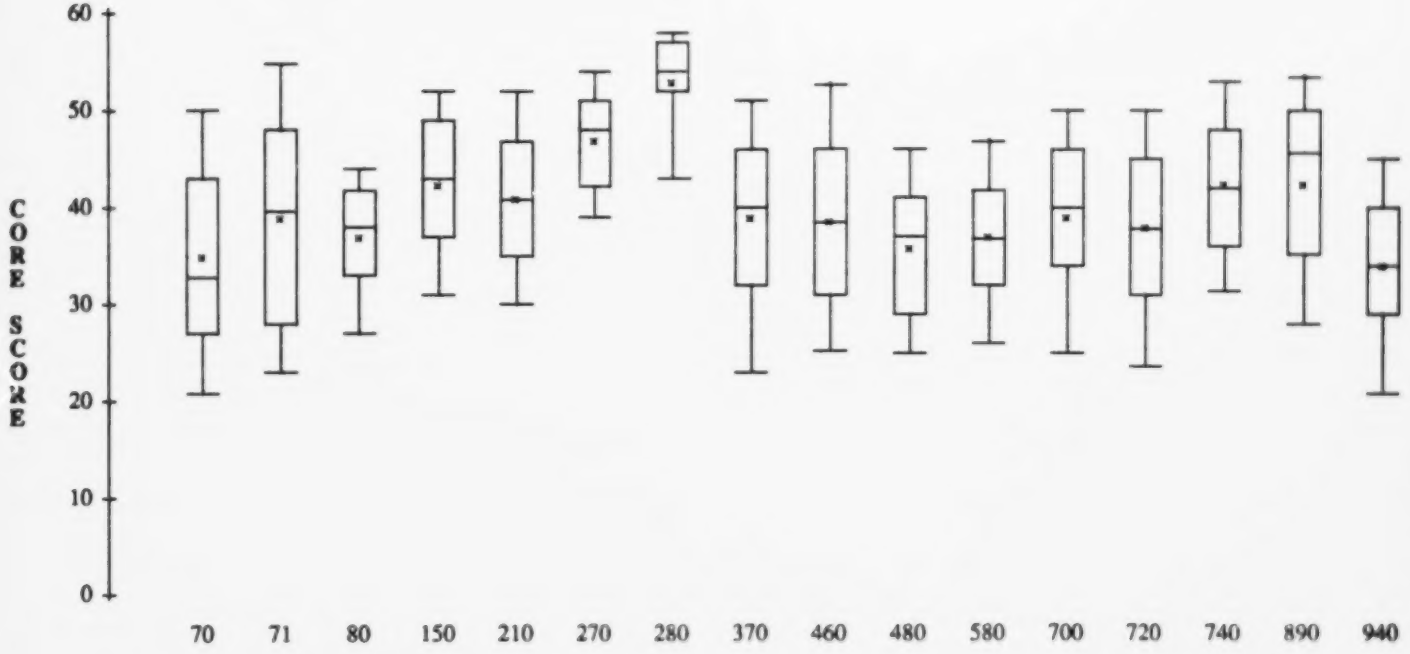
Figure 7. Distributions of Algebra I Core Scores by Region

Regions :

1	Northeast	5	North Central
2	Southeast	6	Southwest
3	Central	7	Northwest
4	South Central	8	Western

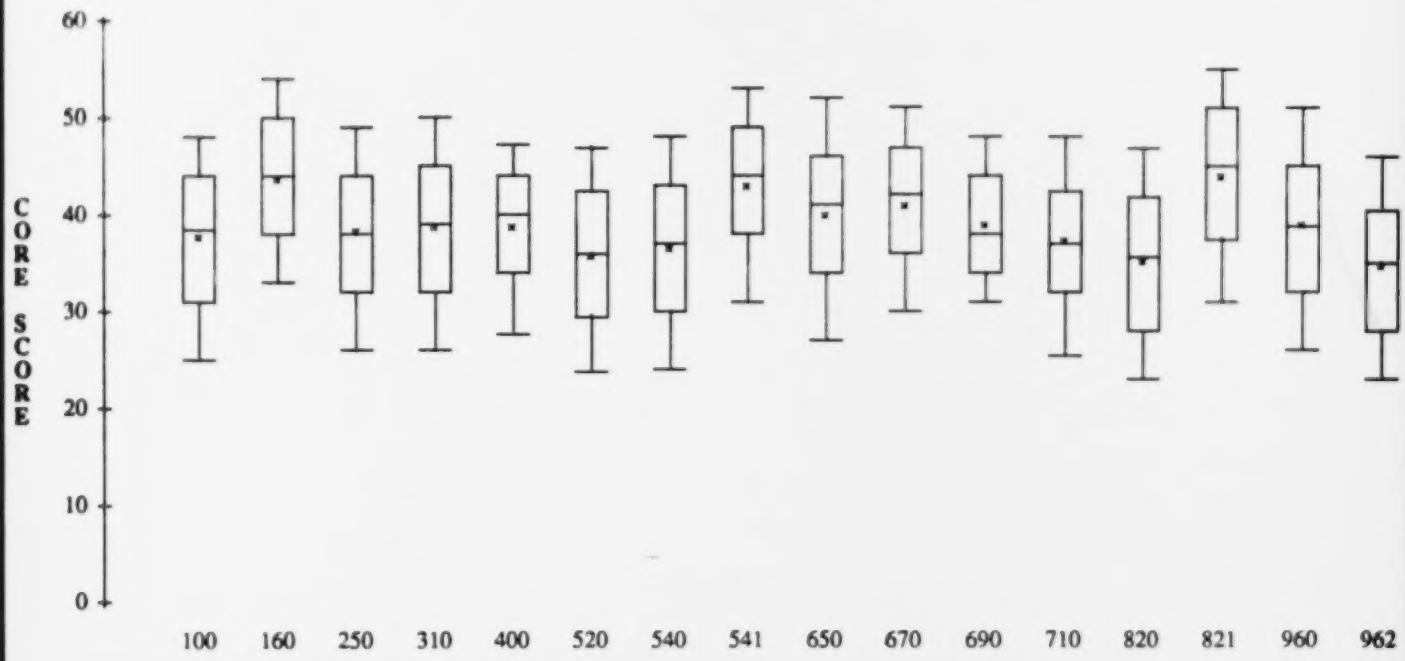
Figure 8. Distributions of Algebra I Core Scores by School Systems in the Northeast Region -- 1988



Northeast Region School Systems:

070 Beaufort Co.	210 Chowan Co.	460 Hertford Co.	720 Perquimans Co.
071 Washington City	270 Currituck Co.	480 Hyde Co.	740 Pitt Co.
080 Bertie Co.	280 Dare Co.	580 Martin Co.	890 Tyrrell Co.
150 Camden Co.	370 Gates Co.	700 Pasquotank Co.	940 Washington Co.

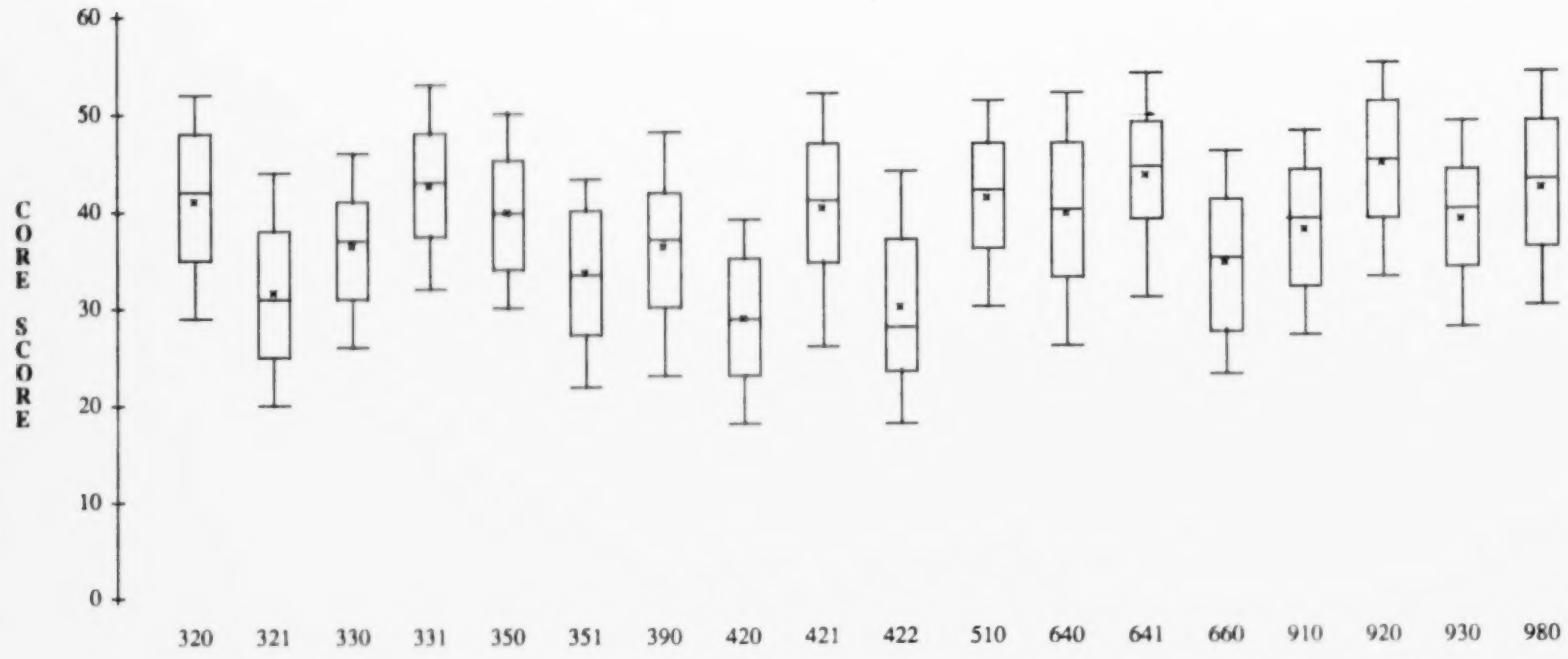
Figure 9. Distributions of Algebra I Core Scores by School Systems in the Southeast Region -- 1988



Southeast Region School Systems:

100 Brunswick Co.	400 Greene Co.	650 New Hanover Co.	820 Sampson Co.
160 Carteret Co.	520 Jones Co.	670 Onslow Co.	821 Clinton City
250 Craven Co.	540 Lenoir Co.	690 Pamlico Co.	960 Wayne Co.
310 Duplin Co.	541 Kinston City	710 Pender Co.	962 Goldsboro City

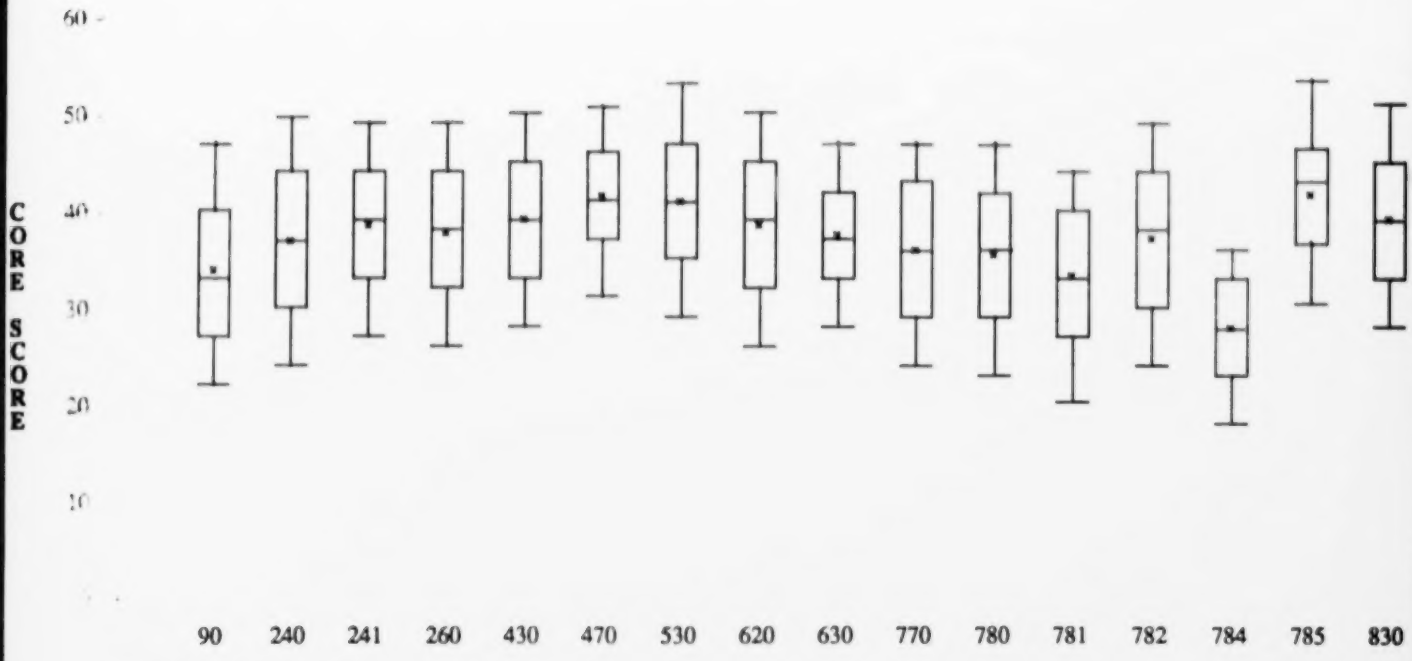
Figure 10. Distributions of Algebra I Core Scores by School Systems in the Central Region -- 1988



Central Region School Systems:

320 Durham Co.
321 Durham City
330 Edgecombe Co.
331 Tarboro City
350 Franklin Co.
351 Franklinton City
390 Granville Co.
420 Halifax Co.
421 Roanoke Rapids City
422 Weldon City
510 Johnston Co.
640 Nash Co.
641 Rocky Mount City
660 Northampton Co.
910 Vance Co.
920 Wake Co.
930 Warren Co.
980 Wilson Co.

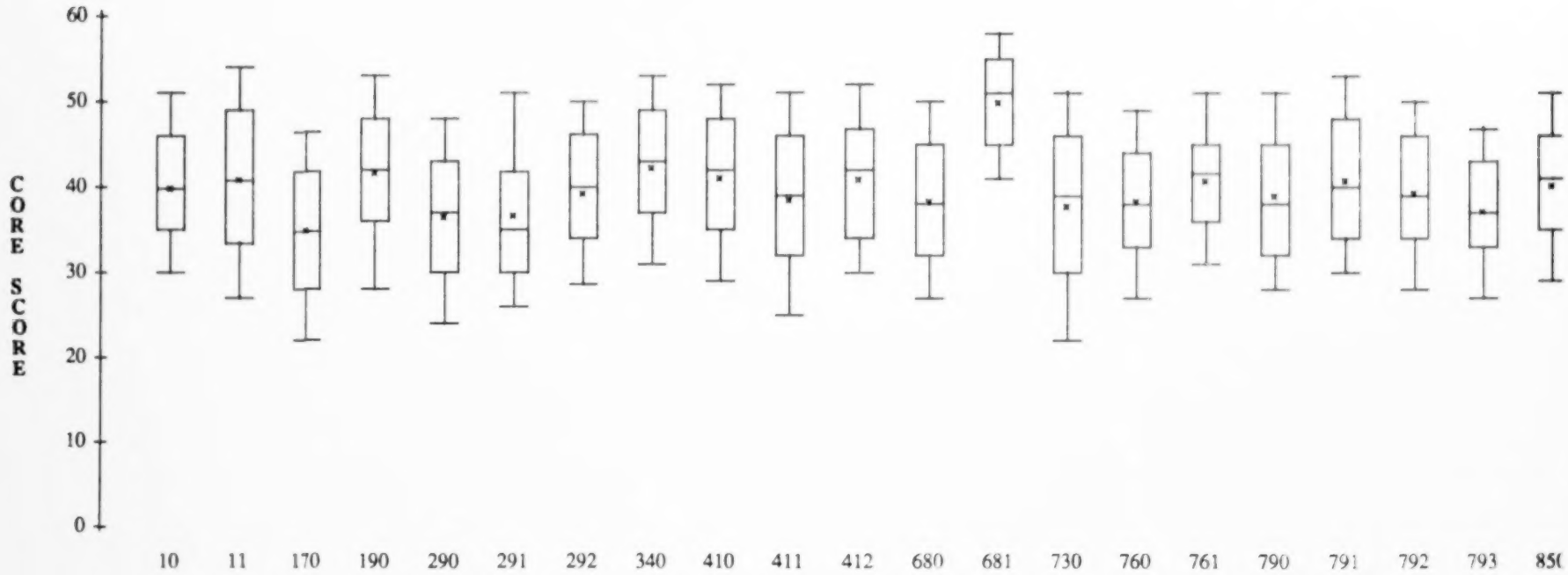
Figure 11. Distributions of Algebra I Core Scores by School Systems in the South Central Region -- 1988



South Central Region School Systems:

090 Bladen Co.	430 Harnett Co.	630 Moore Co.	782 Lumberton City
240 Columbus Co.	470 Hoke Co.	770 Richmond Co.	784 Red Springs City
241 Whiteville City	530 Lee Co.	780 Robeson Co.	785 St. Pauls City
260 Cumberland Co.	620 Montgomery Co.	781 Fairmont City	830 Scotland Co.

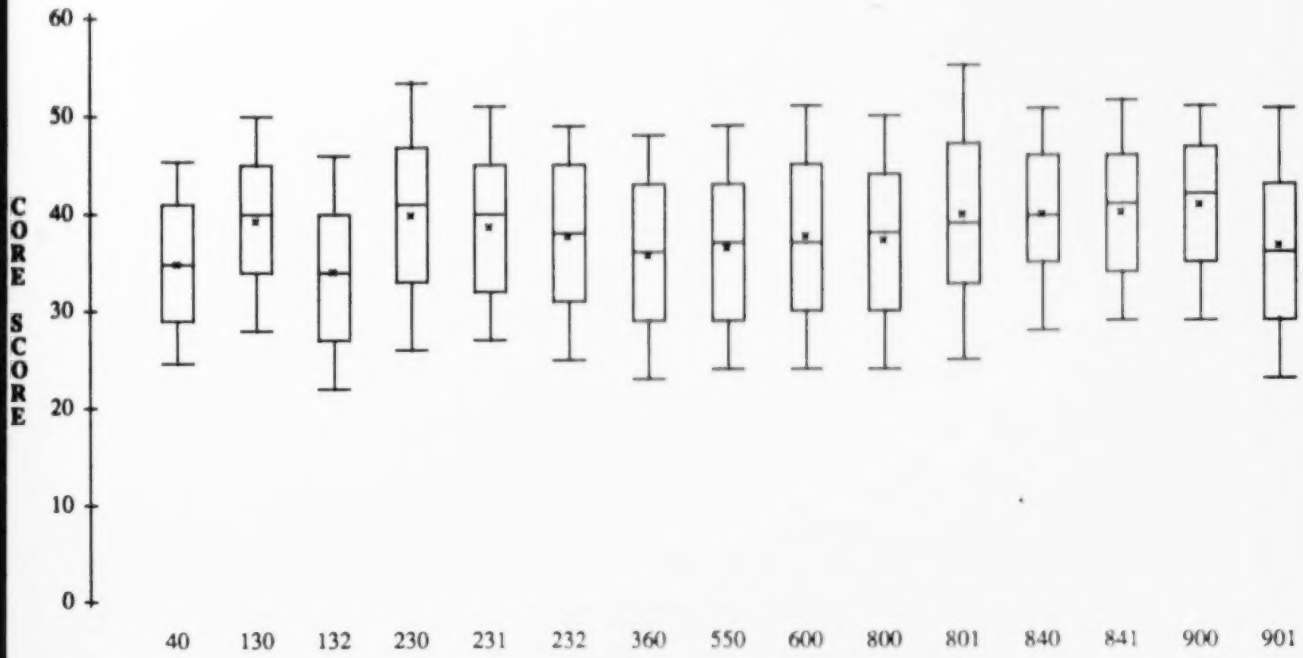
Figure 12. Distributions of Algebra I Core Scores by School Systems in the North Central Region -- 1988



North Central Region School Systems:

010 Alamance Co.	340 Forsyth Co.	760 Randolph Co.
011 Burlington City	410 Guilford Co.	761 Asheboro City
170 Caswell Co.	411 Greensboro City	790 Rockingham Co.
190 Chatham Co.	412 High Point City	791 Eden City
290 Davidson Co.	680 Orange Co.	792 Western Rockingham City
291 Lexington City	681 Chapel Hill City	793 Reidsville City
292 Thomasville City	730 Person Co.	850 Stokes Co.

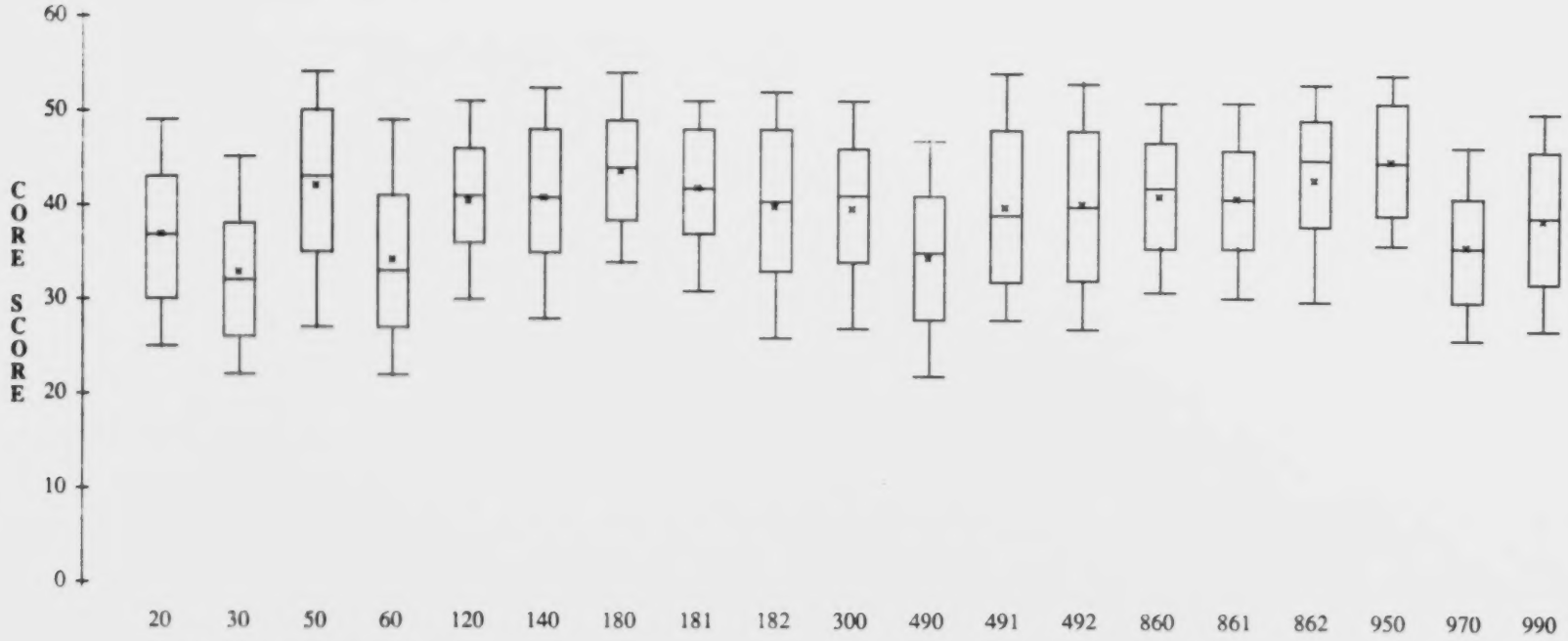
Figure 13. Distributions of Algebra I Core Scores by School Systems in the Southwest Region -- 1988



Southwest Region School Systems:

040 Anson Co.	232 Shelby City	801 Salisbury City
130 Cabarrus Co.	360 Gaston Co.	840 Stanly Co.
132 Kannapolis City	550 Lincoln Co.	841 Albemarle City
230 Cleveland Co.	600 Mecklenburg Co.	900 Union Co.
231 Kings Mountain City	800 Rowan Co.	901 Monroe City

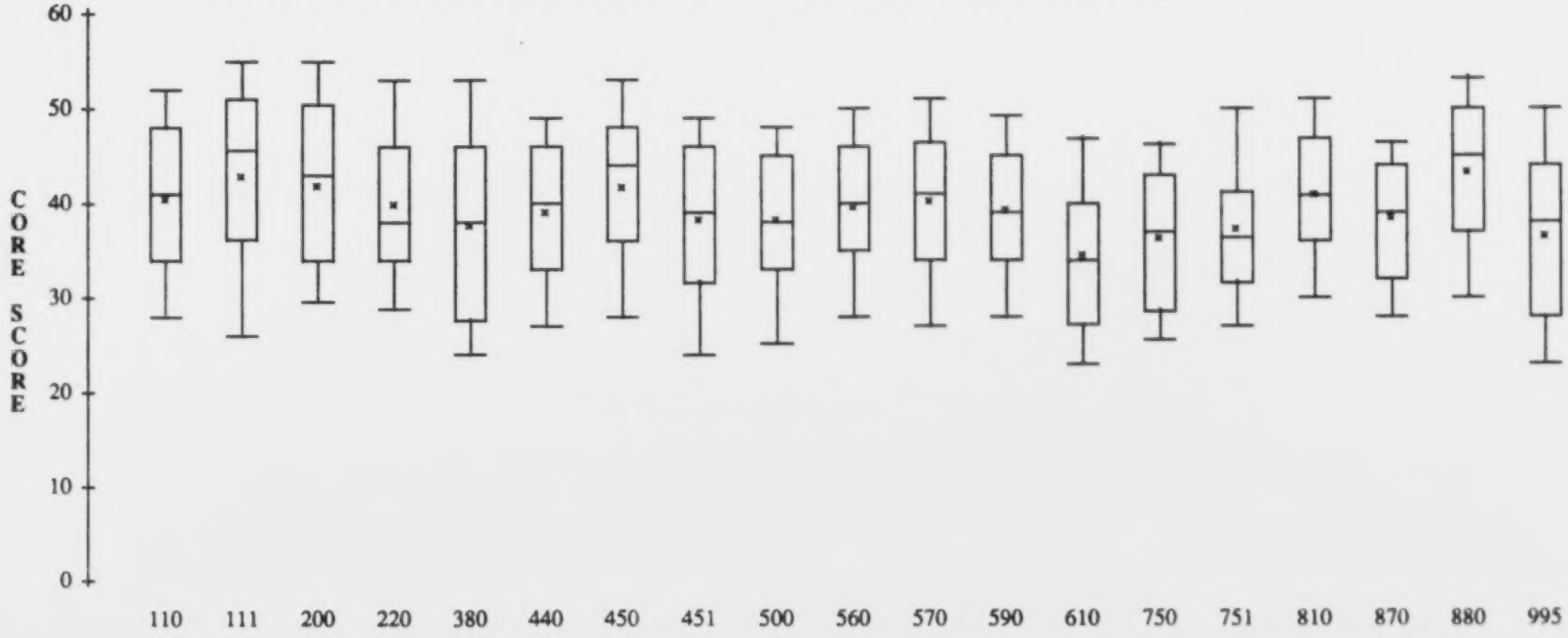
Figure 14. Distributions of Algebra I Core Scores by School Systems in the Northwest Region -- 1988



Northwest Region School Systems:

020 Alexander Co.	140 Caldwell Co.	490 Iredell Co.	862 Mt. Airy City
030 Alleghany Co.	180 Catawba Co.	491 Mooresville City	950 Watauga Co.
050 Ashe Co.	181 Hickory City	492 Statesville City	970 Wilkes Co.
060 Avery Co.	182 Newton-Conover City	860 Surry Co.	990 Yadkin Co.
120 Burke Co.	300 Davie Co.	861 Elkin City	

Figure 15. Distributions of Algebra I Core Scores by School Systems in the Western Region -- 1988



Western Region School Systems:

110 Buncombe Co.	440 Haywood Co.	570 Madison Co.	810 Rutherford Co.
111 Asheville City	450 Henderson Co.	590 McDowell Co.	870 Swain Co.
200 Cherokee Co.	451 Hendersonville City	610 Mitchell Co.	880 Transylvania Co.
220 Clay Co.	500 Jackson Co.	750 Polk Co.	995 Yancy Co.
380 Graham Co.	560 Macon Co.	751 Tryon City	

TABLE 10

Core Performance, Participation Rate, Yield, and Effective Yield
Algebra I: 1986-1988

REGION NORTHEAST — REGION REPORT

	1986				1987				1988			
	AVERAGE CORE	PERCENT OF CLASS	YIELD	EFFECTIVE YIELD	AVERAGE CORE	PERCENT OF CLASS	YIELD	EFFECTIVE YIELD	AVERAGE CORE	PERCENT OF CLASS	YIELD	EFFECTIVE YIELD
BEAUFORT COUNTY	33.6	62.9	35.2	26.7	36.3	53.2	32.2	25.8	34.8	57.5	33.4	24.7
WASHINGTON CITY	36.0	64.9	38.9	32.2	37.2	68.3	42.3	33.3	38.9	81.0	52.5	40.6
BERTIE COUNTY	34.6	77.3	44.6	35.0	36.4	52.4	31.8	27.6	36.8	71.6	43.9	39.4
CAMDEN COUNTY	37.5	85.4	53.4	48.2	41.8	63.6	44.4	42.2	42.2	77.2	54.3	51.6
CHOWAN COUNTY	40.7	67.5	45.8	42.1	40.4	92.6	62.3	55.8	40.7	70.1	47.5	44.7
CURRITUCK COUNTY	46.2	65.9	50.7	49.3	47.1	48.5	38.1	37.7	46.8	55.7	43.4	43.4
DARE COUNTY	41.0	63.6	43.5	41.4	45.9	54.0	41.3	39.5	52.9	54.3	47.8	47.8
GATES COUNTY	39.2	68.9	45.0	42.1	42.7	52.4	37.3	34.8	38.9	73.9	48.0	40.9
HERTFORD COUNTY	32.2	36.6	19.6	14.1	37.0	47.7	29.4	22.9	38.4	56.8	36.4	31.3
HYDE COUNTY	34.7	40.8	23.6	21.2	34.2	52.1	29.7	21.2	35.5	50.6	29.9	24.5
MARTIN COUNTY	34.3	63.7	36.4	29.3	33.5	70.9	39.6	28.6	36.9	57.7	35.5	30.7
PASQUOTANK COUNTY	38.2	68.9	43.9	38.3	37.6	73.3	45.9	39.3	38.9	78.1	50.6	44.5
PERQUIMANS COUNTY	41.9	55.8	39.0	37.5	44.0	65.7	48.2	47.8	37.8	67.6	42.6	35.5
PITT COUNTY	34.3	70.3	40.2	30.2	39.4	82.0	53.9	47.7	42.1	59.4	41.7	40.0
GREENVILLE CITY	40.6	86.8	58.7	55.1								
TYRRELL COUNTY	36.5	36.0	21.9	17.8	35.8	48.2	28.8	25.6	42.1	71.0	49.8	45.3
WASHINGTON COUNTY	31.1	63.2	32.8	22.8	34.1	68.1	38.7	28.2	33.8	70.9	39.9	30.9

NOTE: PERCENT OF CLASS IS AN ESTIMATE OF ALGEBRA I PARTICIPATION CALCULATED BY DIVIDING THE TOTAL NUMBER OF ALGEBRA I STUDENTS BY THE NUMBER OF STUDENTS IN THE NINTH GRADE CLASS. YIELD IS AN INDEX OF THE EFFECTIVENESS OF AN ALGEBRA I PROGRAM WHICH COMBINES PARTICIPATION AND PERFORMANCE. IT IS CALCULATED BY MULTIPLYING THE PERCENT OF A CLASS TAKING ALGEBRA I BY THE PERCENT OF CORE ITEMS ANSWERED CORRECTLY AND THEN MULTIPLYING BY 100. EFFECTIVE YIELD IS A SIMILAR INDEX WHICH COUNTS AS 'PARTICIPATING' IN ALGEBRA I ONLY THOSE STUDENTS WHOSE ACHIEVEMENT IS ESTIMATED TO BE PASSING.

TABLE 10, cont'd.

NORTH CAROLINA END-OF-COURSE TESTING PROGRAM
CORE PERFORMANCE, PARTICIPATION RATE, YIELD, AND EFFECTIVE YIELD
ALGEBRA I: 1986-1988

REGION SOUTHEAST — REGION REPORT

	1986				1987				1988			
	AVERAGE CORE	PERCENT OF CLASS	YIELD	EFFECTIVE YIELD	AVERAGE CORE	PERCENT OF CLASS	YIELD	EFFECTIVE YIELD	AVERAGE CORE	PERCENT OF CLASS	YIELD	EFFECTIVE YIELD
BRUNSWICK COUNTY	30.7	61.2	31.3	19.8	35.7	51.2	30.5	23.1	37.5	49.5	30.9	26.2
CARTERET COUNTY	39.9	64.6	43.0	40.4	45.6	58.9	44.8	43.8	43.6	54.4	39.5	37.9
NEW BERN-CRAVEN	36.7	61.3	37.5	32.6	39.1	63.6	41.5	36.2	38.1	65.6	41.7	37.1
DUPLIN COUNTY	37.4	56.5	35.2	32.5	38.1	65.6	41.7	35.8	38.6	59.7	38.4	33.6
GREENE COUNTY	38.4	59.1	37.8	34.3	41.7	55.7	38.7	36.5	38.6	52.1	33.5	30.3
JONES COUNTY	32.9	64.4	35.3	25.2	39.3	31.9	20.9	17.5	35.7	73.5	43.8	35.7
LENOIR COUNTY	34.6	52.6	30.3	25.1	36.1	64.9	39.0	31.4	36.4	63.0	38.2	31.8
KINSTON CITY	41.7	55.4	38.5	37.4	43.6	58.4	42.4	40.6	42.7	53.5	38.1	36.1
NEW HANOVER COUNT	37.9	73.2	46.2	41.3	38.4	81.1	51.9	43.6	39.9	78.7	52.4	46.8
ONSLOW COUNTY	39.4	60.3	39.6	36.6	39.6	60.2	39.7	34.9	40.9	59.9	40.8	38.6
PAMLICO COUNTY	36.4	41.7	25.3	21.8	38.4	51.1	32.7	29.5	38.7	50.5	32.5	31.3
PENDER COUNTY	32.7	69.7	38.0	28.1	36.2	51.1	30.8	24.7	37.1	53.5	33.1	28.4
SAMPSON COUNTY	32.8	59.4	32.5	23.9	35.6	57.6	34.1	27.1	35.0	55.6	32.4	25.2
CLINTON CITY	41.6	57.4	39.8	38.1	40.8	65.2	44.3	41.9	43.8	62.5	45.6	43.1
WAYNE COUNTY	35.3	70.4	41.4	33.8	36.0	77.8	46.7	36.8	38.8	65.9	42.6	37.6
GOLDSBORO CITY	33.9	55.6	31.4	24.4	33.3	63.8	35.4	25.6	34.6	75.9	43.8	33.5

NOTE: PERCENT OF CLASS IS AN ESTIMATE OF ALGEBRA I PARTICIPATION CALCULATED BY DIVIDING THE TOTAL NUMBER OF ALGEBRA I STUDENTS BY THE NUMBER OF STUDENTS IN THE NINTH GRADE CLASS. YIELD IS AN INDEX OF THE EFFECTIVENESS OF AN ALGEBRA I PROGRAM WHICH COMBINES PARTICIPATION AND PERFORMANCE. IT IS CALCULATED BY MULTIPLYING THE PERCENT OF A CLASS TAKING ALGEBRA I BY THE PERCENT OF CORE ITEMS ANSWERED CORRECTLY AND THEN MULTIPLYING BY 100. EFFECTIVE YIELD IS A SIMILAR INDEX WHICH COUNTS AS 'PARTICIPATING' IN ALGEBRA I ONLY THOSE STUDENTS WHOSE ACHIEVEMENT IS ESTIMATED TO BE PASSING.

TABLE 10, cont'd.

NORTH CAROLINA END-OF-COURSE TESTING PROGRAM
CORE PERFORMANCE, PARTICIPATION RATE, YIELD, AND EFFECTIVE YIELD
ALGEBRA I: 1986-1988

REGION CENTRAL — REGION REPORT

	1986				1987				1988			
	AVERAGE CORE	PERCENT OF CLASS	YIELD	EFFECTIVE YIELD	AVERAGE CORE	PERCENT OF CLASS	YIELD	EFFECTIVE YIELD	AVERAGE CORE	PERCENT OF CLASS	YIELD	EFFECTIVE YIELD
DURHAM COUNTY	39.6	76.4	50.4	45.7	41.6	75.5	52.3	49.5	41.0	75.7	51.8	48.1
DURHAM CITY	30.8	49.0	25.2	15.7	30.0	59.4	29.7	17.1	31.6	60.9	32.1	20.0
EDGECOMBE COUNTY	35.7	31.9	19.0	15.9	35.0	37.3	21.8	17.4	36.4	49.7	30.2	26.5
TARBORO CITY	43.5	42.2	30.6	29.6	42.0	66.4	46.5	43.8	42.6	54.1	38.4	37.0
FRANKLIN COUNTY	38.2	63.5	40.4	37.4	41.8	62.6	43.6	40.7	39.8	53.4	35.5	33.0
FRANKLINTON CITY	32.3	35.2	18.9	15.1	34.9	53.6	31.2	21.3	33.6	47.2	26.5	19.8
GRANVILLE COUNTY	38.3	61.7	39.4	34.0	38.7	74.8	48.2	42.4	36.1	55.6	33.5	27.8
HALIFAX COUNTY	30.5	49.4	25.1	15.7	29.5	53.6	26.3	14.2	28.9	61.9	29.8	17.4
ROANOKE RPDS CITY	40.4	67.0	45.1	40.8	42.8	72.1	51.4	49.8	40.2	82.6	55.3	49.5
WELDON CITY	33.5	51.7	28.9	23.2	28.8	58.7	28.1	14.5	30.1	75.0	37.6	19.6
JOHNSTON COUNTY	40.5	59.3	40.0	37.2	43.2	59.8	43.0	41.0	41.3	64.2	44.1	42.0
NASH COUNTY	37.2	64.3	39.9	34.8	39.3	71.3	46.7	39.1	39.6	69.0	45.5	39.7
ROCKY MOUNT CITY	43.6	67.9	49.3	47.7	43.2	64.8	46.7	44.3	43.4	49.1	35.5	33.6
NORTHAMPTON COUNT	33.9	54.6	30.8	24.2	34.4	75.1	43.0	32.1	34.5	74.5	42.9	32.2
VANCE COUNTY	37.3	49.7	30.9	27.6	38.8	53.5	34.6	31.4	37.9	63.8	40.3	35.9
WAKE COUNTY	42.3	69.1	48.7	45.4	44.2	72.5	53.5	50.4	44.6	77.6	57.7	55.7
WARREN COUNTY	38.6	40.3	25.9	23.6	36.9	51.2	31.5	25.7	38.7	47.0	30.3	27.5
WILSON COUNTY	39.5	53.2	35.0	31.8	41.0	48.9	33.4	30.5	42.1	53.2	37.3	34.4

NOTE: PERCENT OF CLASS IS AN ESTIMATE OF ALGEBRA I PARTICIPATION CALCULATED BY DIVIDING THE TOTAL NUMBER OF ALGEBRA I STUDENTS BY THE NUMBER OF STUDENTS IN THE NINTH GRADE CLASS. YIELD IS AN INDEX OF THE EFFECTIVENESS OF AN ALGEBRA I PROGRAM WHICH COMBINES PARTICIPATION AND PERFORMANCE. IT IS CALCULATED BY MULTIPLYING THE PERCENT OF A CLASS TAKING ALGEBRA I BY THE PERCENT OF CORE ITEMS ANSWERED CORRECTLY AND THEN MULTIPLYING BY 100. EFFECTIVE YIELD IS A SIMILAR INDEX WHICH COUNTS AS 'PARTICIPATING' IN ALGEBRA I ONLY THOSE STUDENTS WHOSE ACHIEVEMENT IS ESTIMATED TO BE PASSING.

TABLE 10, cont'd.

NORTH CAROLINA END-OF-COURSE TESTING PROGRAM
CORE PERFORMANCE, PARTICIPATION RATE, YIELD, AND EFFECTIVE YIELD
ALGEBRA I: 1986-1988

REGION SOUTH CENTRAL — REGION REPORT

	1986				1987				1988			
	AVERAGE CORE	PERCENT OF CLASS	YIELD	EFFECTIVE YIELD	AVERAGE CORE	PERCENT OF CLASS	YIELD	EFFECTIVE YIELD	AVERAGE CORE	PERCENT OF CLASS	YIELD	EFFECTIVE YIELD
BLADEN COUNTY	33.4	62.5	34.8	24.5	33.7	60.6	34.0	24.8	33.8	67.9	38.2	27.8
COLUMBUS COUNTY	37.5	42.9	26.8	22.9	40.0	42.7	28.4	25.5	36.7	51.0	31.2	25.1
WHITEVILLE CITY	38.0	84.3	53.4	46.2	39.2	72.2	47.2	42.1	38.4	84.2	53.9	48.1
CUMBERLAND COUNTY	37.8	68.4	43.1	37.1	39.2	64.8	42.3	36.7	37.7	74.6	46.9	40.8
HARNETT COUNTY	34.1	64.1	36.4	27.7	36.6	70.0	42.7	35.0	39.0	53.3	34.7	31.6
HOKE COUNTY	34.7	70.3	40.7	33.1	40.4	48.4	32.6	30.5	41.4	52.6	36.3	34.8
LEE COUNTY	36.3	62.0	37.5	33.6	38.1	74.0	47.0	43.6	40.7	88.5	60.1	55.9
MONTGOMERY COUNTY	37.3	79.0	49.1	41.8	39.3	76.0	49.8	44.5	38.5	78.8	50.6	43.5
MOORE COUNTY	38.8	59.0	38.2	35.2	37.8	60.3	38.0	33.5	37.4	65.9	41.1	37.4
RICHMOND COUNTY	32.2	47.1	25.3	18.2	36.4	54.3	32.9	27.0	35.9	72.4	43.3	35.0
ROBESON COUNTY	32.1	54.8	29.3	20.0	35.8	44.6	26.6	21.5	35.4	38.0	22.4	17.6
FAIRMONT CITY	30.2	52.3	26.3	16.2	34.3	63.1	36.1	24.8	33.1	76.6	42.3	31.1
LUMBERTON CITY	36.8	65.9	40.4	32.5	34.6	78.7	45.3	32.1	37.0	80.1	49.4	40.9
RED SPRINGS	32.7	69.8	38.0	27.4	29.4	71.2	34.9	18.9	27.8	56.9	26.4	13.6
SAINT PAULS CITY	37.3	47.6	29.6	26.6	42.0	54,2	37.9	34.7	41.6	42.2	29.3	27.1
SCOTLAND COUNTY	37.0	71.6	44.2	37.2	41.2	65.7	45.2	40.9	39.0	77.1	50.1	45.3

NOTE: PERCENT OF CLASS IS AN ESTIMATE OF ALGEBRA I PARTICIPATION CALCULATED BY DIVIDING THE TOTAL NUMBER OF ALGEBRA I STUDENTS BY THE NUMBER OF STUDENTS IN THE NINTH GRADE CLASS. YIELD IS AN INDEX OF THE EFFECTIVENESS OF AN ALGEBRA I PROGRAM WHICH COMBINES PARTICIPATION AND PERFORMANCE. IT IS CALCULATED BY MULTIPLYING THE PERCENT OF A CLASS TAKING ALGEBRA I BY THE PERCENT OF CORE ITEMS ANSWERED CORRECTLY AND THEN MULTIPLYING BY 100. EFFECTIVE YIELD IS A SIMILAR INDEX WHICH COUNTS AS 'PARTICIPATING' IN ALGEBRA I ONLY THOSE STUDENTS WHOSE ACHIEVEMENT IS ESTIMATED TO BE PASSING.

TABLE 10, cont'd.

NORTH CAROLINA END-OF-COURSE TESTING PROGRAM
CORE PERFORMANCE, PARTICIPATION RATE, YIELD, AND EFFECTIVE YIELD
ALGEBRA I: 1986-1988

REGION NORTH CENTRAL — REGION REPORT

	1986				1987				1988			
	AVERAGE CORE	PERCENT OF CLASS	YIELD	EFFECTIVE YIELD	AVERAGE CORE	PERCENT OF CLASS	YIELD	EFFECTIVE YIELD	AVERAGE CORE	PERCENT OF CLASS	YIELD	EFFECTIVE YIELD
ALAMANCE COUNTY	35.5	61.9	36.6	30.6	38.7	66.3	42.7	37.3	39.9	63.5	42.3	39.2
BURLINGTON CITY	38.1	78.2	49.7	42.8	37.9	94.1	59.5	49.6	40.7	67.6	45.9	41.2
CASWELL COUNTY	35.8	41.3	24.6	19.3	35.3	55.8	32.8	25.3	34.9	65.2	37.9	29.3
CHATHAM COUNTY	39.0	54.5	35.4	32.7	39.5	60.7	40.0	35.3	41.5	57.3	39.7	36.3
DAVIDSON COUNTY	34.1	68.8	39.1	29.6	35.3	65.6	38.6	29.1	36.3	67.3	40.8	33.5
LEXINGTON CITY	36.4	59.9	36.3	29.2	37.3	75.5	46.9	41.3	36.6	61.0	37.3	32.4
THOMASVILLE CITY	38.5	49.8	32.0	26.4	42.6	42.9	30.4	27.9	39.3	68.5	44.9	41.2
FORSYTH COUNTY	40.6	62.7	42.4	39.1	42.5	60.4	42.8	40.4	42.1	70.1	49.2	46.3
GUILFORD COUNTY	40.0	65.7	43.8	40.3	42.2	68.0	47.8	45.1	41.0	67.6	46.2	42.8
GREENSBORO CITY	36.6	92.9	56.7	48.0	38.5	80.2	51.5	43.9	38.4	83.8	53.6	45.9
HIGH POINT CITY	35.6	58.9	34.9	29.0	38.0	49.5	31.3	27.2	40.8	50.0	34.0	31.4
ORANGE COUNTY	35.3	68.0	40.0	32.4	35.6	81.5	48.4	34.8	38.2	84.0	53.5	46.6
CHAPEL HILL CITY	47.7	83.7	66.5	65.6	50.2	81.6	68.2	68.2	49.8	85.2	70.7	69.6
PERSON COUNTY	37.6	75.2	47.1	41.4	39.9	68.5	45.6	39.8	37.7	70.7	44.4	36.8
RANDOLPH COUNTY	37.0	49.4	30.5	25.6	38.8	64.2	41.5	35.8	38.1	55.9	35.5	31.8
ASHEBORO CITY	41.3	66.3	45.6	42.6	40.7	78.9	53.6	50.2	40.6	68.7	46.5	43.5
ROCKINGHAM COUNTY	39.9	62.3	41.4	38.2	39.9	71.0	47.2	40.7	38.7	79.7	51.4	47.0
EDEN CITY	39.1	68.7	44.8	40.9	42.7	59.2	42.1	41.0	40.6	75.3	51.0	47.4
WEST. ROCKINGHAM	39.3	47.5	31.1	28.3	39.6	57.3	37.9	33.9	39.1	63.0	41.1	37.4
REIDSVILLE CITY	36.4	94.5	57.3	50.0	38.5	66.4	42.6	38.5	37.0	71.8	44.3	39.9
STOKES COUNTY	39.2	55.0	35.9	32.5	39.1	59.7	38.9	34.4	40.0	52.5	35.0	32.6

NOTE: PERCENT OF CLASS IS AN ESTIMATE OF ALGEBRA I PARTICIPATION CALCULATED BY DIVIDING THE TOTAL NUMBER OF ALGEBRA I STUDENTS BY THE NUMBER OF STUDENTS IN THE NINTH GRADE CLASS. YIELD IS AN INDEX OF THE EFFECTIVENESS OF AN ALGEBRA I PROGRAM WHICH COMBINES PARTICIPATION AND PERFORMANCE. IT IS CALCULATED BY MULTIPLYING THE PERCENT OF A CLASS TAKING ALGEBRA I BY THE PERCENT OF CORE ITEMS ANSWERED CORRECTLY AND THEN MULTIPLYING BY 100. EFFECTIVE YIELD IS A SIMILAR INDEX WHICH COUNTS AS 'PARTICIPATING' IN ALGEBRA I ONLY THOSE STUDENTS WHOSE ACHIEVEMENT IS ESTIMATED TO BE PASSING.

TABLE 10, cont'd.

NORTH CAROLINA END-OF-COURSE TESTING PROGRAM
CORE PERFORMANCE, PARTICIPATION RATE, YIELD, AND EFFECTIVE YIELD
ALGEBRA I: 1986-1988

REGION SOUTHWEST — REGION REPORT

	1986				1987				1988			
	AVERAGE CORE	PERCENT OF CLASS	YIELD	EFFECTIVE YIELD	AVERAGE CORE	PERCENT OF CLASS	YIELD	EFFECTIVE YIELD	AVERAGE CORE	PERCENT OF CLASS	YIELD	EFFECTIVE YIELD
ANSON COUNTY	35.8	70.7	42.2	34.4	35.7	53.0	31.6	24.4	34.8	66.2	38.4	30.0
CABARRUS COUNTY	39.0	70.1	45.6	41.5	39.8	71.9	47.7	44.0	39.3	80.1	52.4	47.7
KANNAPOLIS CITY	33.2	45.7	25.3	18.7	31.6	66.9	35.3	21.7	34.0	73.4	41.6	30.6
CLEVELAND COUNTY	38.9	63.4	41.1	35.8	40.8	58.1	39.5	35.4	39.9	57.0	37.9	33.5
KINGS MTN. CITY	37.6	63.7	39.9	35.7	37.9	70.4	44.5	38.7	38.6	53.2	34.3	30.7
SHELBY CITY	34.9	78.5	45.7	35.7	38.6	81.5	52.4	44.1	37.7	72.7	45.6	39.2
GASTON COUNTY	35.1	62.7	36.7	29.5	36.3	65.7	39.7	31.8	35.6	63.2	37.5	29.6
LINCOLN COUNTY	36.3	64.9	39.3	30.9	37.2	54.4	33.8	27.8	36.3	68.6	41.5	33.8
MECKLENBURG COUNT	37.9	72.3	45.7	39.1	37.8	78.5	49.4	40.5	37.6	73.1	45.8	38.4
ROWAN COUNTY	37.9	69.7	44.0	38.4	37.4	72.4	45.2	38.0	37.3	67.8	42.1	35.0
SALISBURY CITY	38.9	77.7	50.4	46.4	40.8	78.5	53.4	50.1	39.8	64.3	42.6	37.5
STANLY COUNTY	36.9	73.0	44.9	39.9	36.5	76.8	46.7	36.9	39.9	66.3	44.1	40.3
ALBEMARLE CITY	37.3	44.5	27.7	23.8	41.9	59.1	41.2	37.4	40.1	76.3	51.0	47.2
UNION COUNTY	38.9	48.3	31.3	28.0	41.4	48.1	33.2	30.9	40.8	50.5	34.4	31.6
MONROE CITY	36.6	45.4	27.7	23.0	39.6	52.7	34.8	32.2	36.6	53.6	32.7	26.6

NOTE: PERCENT OF CLASS IS AN ESTIMATE OF ALGEBRA I PARTICIPATION CALCULATED BY DIVIDING THE TOTAL NUMBER OF ALGEBRA I STUDENTS BY THE NUMBER OF STUDENTS IN THE NINTH GRADE CLASS. YIELD IS AN INDEX OF THE EFFECTIVENESS OF AN ALGEBRA I PROGRAM WHICH COMBINES PARTICIPATION AND PERFORMANCE. IT IS CALCULATED BY MULTIPLYING THE PERCENT OF A CLASS TAKING ALGEBRA I BY THE PERCENT OF CORE ITEMS ANSWERED CORRECTLY AND THEN MULTIPLYING BY 100. EFFECTIVE YIELD IS A SIMILAR INDEX WHICH COUNTS AS 'PARTICIPATING' IN ALGEBRA I ONLY THOSE STUDENTS WHOSE ACHIEVEMENT IS ESTIMATED TO BE PASSING.

TABLE 10, cont'd.

NORTH CAROLINA END-OF-COURSE TESTING PROGRAM
CORE PERFORMANCE, PARTICIPATION RATE, YIELD, AND EFFECTIVE YIELD
ALGEBRA I: 1986-1988

REGION NORTHWEST — REGION REPORT

	1986				1987				1988			
	AVERAGE CORE	PERCENT OF CLASS	YIELD	EFFECTIVE YIELD	AVERAGE CORE	PERCENT OF CLASS	YIELD	EFFECTIVE YIELD	AVERAGE CORE	PERCENT OF CLASS	YIELD	EFFECTIVE YIELD
ALEXANDER COUNTY	37.6	85.0	53.3	48.8	38.3	75.8	48.4	42.2	36.7	86.1	52.7	43.9
ALLEGHANY COUNTY	35.1	61.8	36.2	30.4	36.2	50.0	30.2	24.4	32.7	81.2	44.2	32.4
ASHE COUNTY	38.7	57.5	37.1	33.8	42.1	55.4	38.9	36.4	42.0	58.0	40.6	36.5
AVERY COUNTY	34.0	56.5	32.0	25.9	36.3	57.9	35.0	27.9	34.2	65.6	37.4	27.1
BURKE COUNTY	36.3	65.9	39.9	33.2	38.8	64.8	41.9	37.5	40.5	65.5	44.3	41.8
CALDWELL COUNTY	38.7	66.7	43.0	36.2	41.3	52.1	35.9	32.4	40.7	56.2	38.1	34.8
CATAWBA COUNTY	42.3	64.4	45.4	42.3	43.3	60.3	43.5	41.4	43.6	57.2	41.6	40.4
HICKORY CITY	41.5	64.6	44.7	42.3	40.7	63.9	43.3	39.7	41.9	78.7	55.0	52.6
NEWTON CITY	38.3	73.7	47.0	42.3	39.1	84.5	55.1	48.1	39.9	73.4	48.8	43.6
DAVIE COUNTY	38.1	62.2	39.5	33.2	40.2	61.6	41.3	37.0	39.7	69.9	46.3	40.8
IREDELL COUNTY	34.4	71.8	41.2	31.8	35.4	66.8	39.4	30.5	34.4	83.9	48.2	36.6
MOORESVILLE CITY	39.9	66.8	44.4	43.1	39.3	80.4	52.6	48.1	39.9	57.0	37.9	34.4
STATESVILLE CITY	38.1	64.1	40.7	34.2	41.0	48.4	33.1	30.5	40.2	60.9	40.8	36.6
SURRY COUNTY	37.7	52.9	33.2	29.1	37.5	53.6	33.5	29.3	41.0	65.4	44.7	42.5
ELKIN CITY	34.1	77.7	44.2	38.6	34.0	69.9	39.6	28.6	40.8	96.1	65.4	62.7
MOUNT AIRY CITY	35.3	76.6	45.1	33.8	42.0	57.2	40.0	35.9	42.8	74.5	53.2	50.1
WATAUGA COUNTY	45.9	51.9	39.7	39.5	46.3	54.2	41.9	41.9	44.8	68.0	50.8	49.8
WILKES COUNTY	34.5	55.7	32.0	25.8	37.1	59.3	36.7	31.4	35.8	57.1	34.0	29.6
YADKIN COUNTY	35.4	48.7	28.7	23.2	37.6	59.7	37.4	32.4	38.6	59.7	38.4	34.1

NOTE: PERCENT OF CLASS IS AN ESTIMATE OF ALGEBRA I PARTICIPATION CALCULATED BY DIVIDING THE TOTAL NUMBER OF ALGEBRA I STUDENTS BY THE NUMBER OF STUDENTS IN THE NINTH GRADE CLASS. YIELD IS AN INDEX OF THE EFFECTIVENESS OF AN ALGEBRA I PROGRAM WHICH COMBINES PARTICIPATION AND PERFORMANCE. IT IS CALCULATED BY MULTIPLYING THE PERCENT OF A CLASS TAKING ALGEBRA I BY THE PERCENT OF CORE ITEMS ANSWERED CORRECTLY AND THEN MULTIPLYING BY 100. EFFECTIVE YIELD IS A SIMILAR INDEX WHICH COUNTS AS 'PARTICIPATING' IN ALGEBRA I ONLY THOSE STUDENTS WHOSE ACHIEVEMENT IS ESTIMATED TO BE PASSING.

TABLE 10, cont'd.

NORTH CAROLINA END-OF-COURSE TESTING PROGRAM
CORE PERFORMANCE, PARTICIPATION RATE, YIELD, AND EFFECTIVE YIELD
ALGEBRA I: 1986-1988

REGION WESTERN — REGION REPORT

	1986				1987				1988			
	AVERAGE CORE	PERCENT OF CLASS	YIELD	EFFECTIVE YIELD	AVERAGE CORE	PERCENT OF CLASS	YIELD	EFFECTIVE YIELD	AVERAGE CORE	PERCENT OF CLASS	YIELD	EFFECTIVE YIELD
BUNCOMBE COUNTY	39.7	59.6	39.4	34.6	41.4	70.7	48.8	44.8	40.5	66.7	45.0	40.6
ASHEVILLE CITY	39.7	77.9	51.5	47.0	40.1	76.4	51.0	44.0	42.9	68.2	48.8	43.0
CHEROKEE COUNTY	37.6	59.9	37.5	33.0	37.2	59.4	36.8	31.2	41.9	55.6	38.8	35.5
CLAY COUNTY	33.8	71.4	40.2	31.7	39.6	47.1	31.1	28.0	39.9	53.4	35.5	32.7
GRAHAM COUNTY	39.6	48.9	32.3	28.2	41.8	56.5	39.4	33.8	37.5	77.0	48.1	36.3
HAYWOOD COUNTY	40.7	60.7	41.2	38.6	41.3	66.3	45.6	42.4	39.0	72.6	47.2	42.5
HENDERSON COUNTY	37.9	67.1	42.4	37.0	41.3	60.9	41.9	38.1	41.6	62.4	43.3	39.5
HENDRSNVLLE CITY	38.3	88.2	53.4	47.0	38.4	89.1	57.0	50.0	38.2	85.2	54.2	45.6
JACKSON COUNTY	39.4	74.1	48.7	43.5	39.1	87.0	56.7	53.4	38.2	63.3	40.3	35.1
MACON COUNTY	40.0	51.5	34.3	31.4	41.3	55.2	38.0	35.3	39.7	66.1	43.8	40.0
MADISON COUNTY	43.5	52.1	37.8	36.1	39.5	51.9	34.2	29.8	40.2	49.0	32.8	29.3
MCDOWELL COUNTY	33.0	58.1	32.0	22.7	39.2	53.6	35.1	30.3	39.1	71.2	46.4	42.1
MITCHELL COUNTY	35.9	78.2	46.8	38.4	37.1	87.2	53.9	44.1	34.4	91.4	52.4	39.3
POLK COUNTY	37.6	51.9	32.5	26.4	36.6	39.0	23.8	21.2	36.2	57.3	34.5	27.7
TRYON CITY	37.0	75.4	46.5	39.4	41.2	56.9	39.1	38.2	37.1	90.0	55.7	49.5
RUTHERFORD COUNTY	39.5	56.3	37.1	33.0	40.5	57.2	38.6	35.7	40.7	50.5	34.2	32.1
SWAIN COUNTY	37.5	46.0	28.8	27.5	38.7	44.3	28.5	25.5	38.4	68.0	43.5	40.1
TRANSYLVANIA COUN	41.2	62.9	43.2	41.1	43.6	63.9	46.4	42.7	43.1	78.5	56.4	53.1
YANCEY COUNTY	33.6	94.9	53.1	38.6	36.7	74.2	45.4	35.9	36.5	44.3	26.9	21.4

NOTE: PERCENT OF CLASS IS AN ESTIMATE OF ALGEBRA I PARTICIPATION CALCULATED BY DIVIDING THE TOTAL NUMBER OF ALGEBRA I STUDENTS BY THE NUMBER OF STUDENTS IN THE NINTH GRADE CLASS. YIELD IS AN INDEX OF THE EFFECTIVENESS OF AN ALGEBRA I PROGRAM WHICH COMBINES PARTICIPATION AND PERFORMANCE. IT IS CALCULATED BY MULTIPLYING THE PERCENT OF A CLASS TAKING ALGEBRA I BY THE PERCENT OF CORE ITEMS ANSWERED CORRECTLY AND THEN MULTIPLYING BY 100. EFFECTIVE YIELD IS A SIMILAR INDEX WHICH COUNTS AS 'PARTICIPATING' IN ALGEBRA I ONLY THOSE STUDENTS WHOSE ACHIEVEMENT IS ESTIMATED TO BE PASSING.

TABLE 11

Select Characteristics of Algebra I Students in Public School Systems: 1988

REGION NORTHEAST

REGION REPORT

	NUMBER TESTED	PERCENT OF CLASS	PERCENT OF EIGHTH GRADE	PERCENT OF NINTH GRADE	PERCENT BLACK	PERCENT ALGEBRA I BLACK	PERCENT LESS THAN HS EDUC	PERCENT ALGEBRA I LESS THAN HS EDUC
BEAUFORT COUNTY	196	57.5	0.0	43.7	41.8	41.3	15.8	13.9
WASHINGTON CITY	230	81.0	12.5	22.5	43.8	35.2	9.5	9.8
BERTIE COUNTY	227	71.6	13.1	23.0	75.8	70.0	28.1	21.8
CAMDEN COUNTY	78	77.2	13.2	41.6	31.2	33.3	21.7	10.3
CHOWAN COUNTY	136	70.1	14.9	23.2	50.9	33.1	12.1	11.1
CURRITUCK COUNTY	112	55.7	7.3	14.9	14.9	17.9	14.5	13.5
DARE COUNTY	132	54.3	5.7	25.5	5.1	4.5	10.6	9.9
GATES COUNTY	88	73.9	9.1	23.5	57.2	61.4	24.6	16.1
HERTFORD COUNTY	222	56.8	12.1	21.0	74.3	68.3	20.8	16.2
HYDE COUNTY	39	50.6	0.0	39.0	49.4	33.3	33.3	7.9
MARTIN COUNTY	306	57.7	6.8	31.7	56.2	49.7	28.6	18.8
PASQUOTANK COUNTY	304	78.1	12.2	38.6	44.8	49.8	14.8	14.0
PERQUIMANS COUNTY	96	67.6	0.0	26.1	43.2	37.5	13.6	14.6
PITT COUNTY	783	59.4	16.4	20.5	50.3	37.8	20.5	7.9
TYRRELL COUNTY	44	71.0	0.0	56.5	48.7	38.6	14.6	13.6
WASHINGTON COUNTY	168	70.9	12.8	37.1	61.0	53.6	29.0	17.7

NOTE: NUMBER TESTED IS THE NUMBER OF STUDENTS WHO TOOK THE ALGEBRA I TEST. PERCENT OF CLASS IS THE TOTAL NUMBER OF ALGEBRA I STUDENTS DIVIDED BY THE NUMBER OF STUDENTS IN THE NINTH GRADE CLASS. IT IS AN ESTIMATE OF THE PERCENT OF A COHORT OR CLASS OF STUDENTS WHO WILL TAKE ALGEBRA I BEFORE LEAVING HIGH SCHOOL. PERCENT OF EIGHTH GRADE IS THE PERCENT OF EIGHTH GRADE STUDENTS TAKING ALGEBRA I. PERCENT OF NINTH GRADE IS THE PERCENT OF NINTH GRADE STUDENTS TAKING ALGEBRA I. PERCENT BLACK IS THE PERCENT OF TOTAL ENROLLMENT THAT IS BLACK. PERCENT ALGEBRA I BLACK IS THE PERCENT OF ALGEBRA I STUDENTS THAT IS BLACK. PERCENT LESS THAN HS EDUC IS THE PERCENT OF EIGHTH GRADE STUDENTS TAKING THE CALIFORNIA ACHIEVEMENT TEST IN 1988 WHOSE PARENTS HAVE LESS THAN A HIGH SCHOOL EDUCATION. PERCENT ALGEBRA I LESS THAN HS EDUC IS THE PERCENT OF ALGEBRA I STUDENTS WHOSE PARENTS HAVE LESS THAN A HIGH SCHOOL EDUCATION.

TABLE 11, cont'd.

NORTH CAROLINA END-OF-COURSE TESTING PROGRAM

ALGEBRA I --- 1988

REGION SOUTHEAST REGION REPORT

	NUMBER TESTED	PERCENT OF CLASS	PERCENT OF EIGHTH GRADE	PERCENT OF NINTH GRADE	PERCENT BLACK	PERCENT ALGEBRA I BLACK	PERCENT LESS THAN HS EDUC	PERCENT ALGEBRA I LESS THAN HS EDUC
BRUNSWICK COUNTY	420	49.5	16.2	16.7	26.8	25.2	15.0	8.3
CARTERET COUNTY	367	54.4	12.4	17.3	13.3	11.5	14.3	6.3
NEW BERN-CRAVEN	759	65.6	5.8	31.0	36.1	31.8	14.0	8.5
DUPLIN COUNTY	403	59.7	14.9	23.9	42.7	41.7	20.4	11.7
GREENE COUNTY	136	52.1	9.0	13.8	62.1	55.6	33.3	12.5
JONES COUNTY	97	73.5	0.0	31.1	55.6	65.6	12.5	7.5
LENOIR COUNTY	356	63.0	12.7	32.9	32.7	29.4	20.6	9.3
KINSTON CITY	236	53.5	6.3	20.6	77.4	68.1	20.8	10.8
NEW HANOVER COUNT	1150	78.7	16.6	30.4	30.0	23.4	11.8	5.5
ONSLOW COUNTY	821	59.9	4.5	26.8	23.1	19.3	12.2	8.9
PAMLICO COUNTY	103	50.5	7.8	28.9	35.2	29.4	13.2	8.8
PENDER COUNTY	253	53.5	3.0	18.0	44.1	39.7	13.6	9.6
SAMPSON COUNTY	300	55.6	0.0	37.0	39.2	34.7	14.4	11.5
CLINTON CITY	145	62.5	7.1	25.4	47.2	42.1	14.0	7.0
WAYNE COUNTY	684	65.9	15.2	20.4	29.3	23.1	10.2	7.4
GOLDSBORO CITY	265	75.9	9.0	25.2	81.9	74.7	16.6	9.8

NOTE: NUMBER TESTED IS THE NUMBER OF STUDENTS WHO TOOK THE ALGEBRA I TEST. PERCENT OF CLASS IS THE TOTAL NUMBER OF ALGEBRA I STUDENTS DIVIDED BY THE NUMBER OF STUDENTS IN THE NINTH GRADE CLASS. IT IS AN ESTIMATE OF THE PERCENT OF A COHORT OR CLASS OF STUDENTS WHO WILL TAKE ALGEBRA I BEFORE LEAVING HIGH SCHOOL. PERCENT OF EIGHTH GRADE IS THE PERCENT OF EIGHTH GRADE STUDENTS TAKING ALGEBRA I. PERCENT OF NINTH GRADE IS THE PERCENT OF NINTH GRADE STUDENTS TAKING ALGEBRA I. PERCENT BLACK IS THE PERCENT OF TOTAL ENROLLMENT THAT IS BLACK. PERCENT ALGEBRA I BLACK IS THE PERCENT OF ALGEBRA I STUDENTS THAT IS BLACK. PERCENT LESS THAN HS EDUC IS THE PERCENT OF EIGHTH GRADE STUDENTS TAKING THE CALIFORNIA ACHIEVEMENT TEST IN 1988 WHOSE PARENTS HAVE LESS THAN A HIGH SCHOOL EDUCATION. PERCENT ALGEBRA I LESS THAN HS EDUC IS THE PERCENT OF ALGEBRA I STUDENTS WHOSE PARENTS HAVE LESS THAN A HIGH SCHOOL EDUCATION.

TABLE 11, cont'd.

NORTH CAROLINA END-OF-COURSE TESTING PROGRAM

ALGEBRA I --- 1988

REGION CENTRAL

REGION REPORT

	NUMBER TESTED	PERCENT OF CLASS	PERCENT OF EIGHTH GRADE	PERCENT OF NINTH GRADE	PERCENT BLACK	PERCENT ALGEBRA I BLACK	PERCENT LESS THAN HS EDUC	PERCENT ALGEBRA I LESS THAN HS EDUC
DURHAM COUNTY	1067	75.7	12.1	34.9	30.9	27.7	9.7	4.6
DURHAM CITY	432	60.9	2.3	28.2	89.6	93.7	20.7	10.4
EDGECOMBE COUNTY	245	49.7	0.0	17.2	60.8	60.4	22.9	13.3
TARBORO CITY	133	54.1	0.0	28.9	53.5	54.1	20.2	15.8
FRANKLIN COUNTY	258	53.4	17.8	16.8	44.9	38.8	14.0	16.0
FRANKLINTON CITY	68	47.2	24.1	22.2	60.9	41.8	38.5	20.6
GRANVILLE COUNTY	335	55.6	15.2	16.6	48.7	40.0	22.6	15.1
HALIFAX COUNTY	407	61.9	29.3	26.0	83.0	83.0	34.7	23.3
ROANOKE RPDS CITY	190	82.6	22.5	38.7	10.6	6.3	17.2	11.6
WELDON CITY	69	75.0	2.9	30.4	88.4	95.7	29.4	25.0
JOHNSTON COUNTY	777	64.2	11.4	31.0	25.4	19.2	17.2	9.4
NASH COUNTY	632	69.0	8.3	30.1	40.5	32.6	18.9	13.2
ROCKY MOUNT CITY	216	49.1	7.6	15.0	77.7	63.4	18.1	7.4
NORTHAMPTON COUNT	245	74.5	18.0	14.0	79.7	75.2	27.2	20.8
VANCE COUNTY	360	63.8	8.2	21.5	56.7	45.8	26.9	11.0
WAKE COUNTY	3628	77.6	17.7	29.6	26.7	17.8	7.5	3.7
WARREN COUNTY	148	47.0	17.6	11.1	73.0	68.2	18.9	13.8
WILSON COUNTY	607	53.2	21.3	20.6	51.4	41.1	26.5	14.2

NOTE: NUMBER TESTED IS THE NUMBER OF STUDENTS WHO TOOK THE ALGEBRA I TEST. PERCENT OF CLASS IS THE TOTAL NUMBER OF ALGEBRA I STUDENTS DIVIDED BY THE NUMBER OF STUDENTS IN THE NINTH GRADE CLASS. IT IS AN ESTIMATE OF THE PERCENT OF A COHORT OR CLASS OF STUDENTS WHO WILL TAKE ALGEBRA I BEFORE LEAVING HIGH SCHOOL. PERCENT OF EIGHTH GRADE IS THE PERCENT OF EIGHTH GRADE STUDENTS TAKING ALGEBRA I. PERCENT OF NINTH GRADE IS THE PERCENT OF NINTH GRADE STUDENTS TAKING ALGEBRA I. PERCENT BLACK IS THE PERCENT OF TOTAL ENROLLMENT THAT IS BLACK. PERCENT ALGEBRA I BLACK IS THE PERCENT OF ALGEBRA I STUDENTS THAT IS BLACK. PERCENT LESS THAN HS EDUC IS THE PERCENT OF EIGHTH GRADE STUDENTS TAKING THE CALIFORNIA ACHIEVEMENT TEST IN 1988 WHOSE PARENTS HAVE LESS THAN A HIGH SCHOOL EDUCATION. PERCENT ALGEBRA I LESS THAN HS EDUC IS THE PERCENT OF ALGEBRA I STUDENTS WHOSE PARENTS HAVE LESS THAN A HIGH SCHOOL EDUCATION.

TABLE 11, cont'd.

NORTH CAROLINA END-OF-COURSE TESTING PROGRAM

ALGEBRA I --- 1988

REGION SOUTH CENTRAL REGION REPORT

	NUMBER TESTED	PERCENT OF CLASS	PERCENT OF EIGHTH GRADE	PERCENT OF NINTH GRADE	PERCENT BLACK	PERCENT ALGEBRA I BLACK	PERCENT LESS THAN HS EDUC	PERCENT ALGEBRA I LESS THAN HS EDUC
BLADEN COUNTY	345	67.9	2.6	37.6	50.4	46.8	16.1	13.2
COLUMBUS COUNTY	362	51.0	0.0	27.9	38.4	30.4	20.5	10.3
WHITEVILLE CITY	160	84.2	17.6	29.5	41.3	33.5	20.3	9.4
CUMBERLAND COUNTY	2625	74.6	10.2	22.1	40.3	40.1	11.4	7.2
HARNETT COUNTY	527	53.3	6.1	30.0	32.0	25.0	23.2	9.2
HOKE COUNTY	202	52.6	6.3	10.7	52.1	53.0	28.7	15.3
LEE COUNTY	445	88.5	12.8	25.8	30.8	22.6	11.0	6.8
MONTGOMERY COUNTY	308	78.8	28.4	27.4	36.2	28.7	21.5	16.7
MOORE COUNTY	465	65.9	7.7	29.6	29.2	21.1	16.3	9.4
RICHMOND COUNTY	501	72.4	9.3	29.5	38.6	33.9	17.0	14.3
ROBESON COUNTY	515	38.0	0.2	20.0	21.3	21.8	28.4	22.1
FAIRMONT CITY	121	76.6	17.0	24.7	50.7	39.7	36.2	10.8
LUMBERTON CITY	245	80.1	13.9	34.0	36.6	33.2	26.4	11.5
RED SPRINGS	99	56.9	0.0	27.6	44.4	45.5	20.3	20.6
SAINT PAULS CITY	54	42.2	0.0	20.3	44.1	37.0	0.0	9.4
SCOTLAND COUNTY	479	77.1	19.4	22.4	44.7	44.1	21.7	18.0

NOTE: NUMBER TESTED IS THE NUMBER OF STUDENTS WHO TOOK THE ALGEBRA I TEST. PERCENT OF CLASS IS THE TOTAL NUMBER OF ALGEBRA I STUDENTS DIVIDED BY THE NUMBER OF STUDENTS IN THE NINTH GRADE CLASS. IT IS AN ESTIMATE OF THE PERCENT OF A COHORT OR CLASS OF STUDENTS WHO WILL TAKE ALGEBRA I BEFORE LEAVING HIGH SCHOOL. PERCENT OF EIGHTH GRADE IS THE PERCENT OF EIGHTH GRADE STUDENTS TAKING ALGEBRA I. PERCENT OF NINTH GRADE IS THE PERCENT OF NINTH GRADE STUDENTS TAKING ALGEBRA I. PERCENT BLACK IS THE PERCENT OF TOTAL ENROLLMENT THAT IS BLACK. PERCENT ALGEBRA I BLACK IS THE PERCENT OF ALGEBRA I STUDENTS THAT IS BLACK. PERCENT LESS THAN HS EDUC IS THE PERCENT OF EIGHTH GRADE STUDENTS TAKING THE CALIFORNIA ACHIEVEMENT TEST IN 1988 WHOSE PARENTS HAVE LESS THAN A HIGH SCHOOL EDUCATION. PERCENT ALGEBRA I LESS THAN HS EDUC IS THE PERCENT OF ALGEBRA I STUDENTS WHOSE PARENTS HAVE LESS THAN A HIGH SCHOOL EDUCATION.

TABLE 11, cont'd.

NORTH CAROLINA END-OF-COURSE TESTING PROGRAM

ALGEBRA I --- 1988

REGION NORTH CENTRAL

REGION REPORT

	NUMBER TESTED	PERCENT OF CLASS	PERCENT OF EIGHTH GRADE	PERCENT OF NINTH GRADE	PERCENT BLACK	PERCENT ALGEBRA I BLACK	PERCENT LESS THAN HS EDUC	PERCENT ALGEBRA I LESS THAN HS EDUC
ALAMANCE COUNTY	555	63.5	12.9	25.7	20.4	18.6	18.3	9.9
BURLINGTON CITY	381	67.6	16.4	28.0	33.6	28.7	16.2	8.4
CASWELL COUNTY	225	65.2	10.1	20.9	49.3	48.2	19.0	14.5
CHATHAM COUNTY	296	57.3	0.0	32.1	32.5	25.3	23.6	9.0
DAVIDSON COUNTY	903	67.3	11.9	34.1	3.2	3.0	20.8	13.3
LEXINGTON CITY	161	61.0	16.1	18.6	38.9	32.9	27.1	13.4
THOMASVILLE CITY	146	68.5	13.8	23.5	46.0	46.9	25.5	16.0
FORSYTH COUNTY	2077	70.1	18.0	19.9	36.4	29.9	11.1	5.1
GUILFORD COUNTY	1366	67.6	11.8	29.0	17.2	13.6	10.2	7.2
GREENSBORO CITY	1422	83.8	22.1	29.7	50.5	45.4	12.1	6.9
HIGH POINT CITY	354	50.0	17.2	15.4	48.1	34.1	21.3	8.3
ORANGE COUNTY	316	84.0	4.9	35.4	27.6	29.8	17.4	13.3
CHAPEL HILL CITY	345	85.2	25.8	43.1	22.2	12.9	6.3	2.6
PERSON COUNTY	318	70.7	15.5	23.6	37.3	32.6	24.2	11.2
RANDOLPH COUNTY	635	55.9	12.1	25.5	5.9	7.0	23.7	13.2
ASHEBORO CITY	202	68.7	18.9	32.3	15.3	7.5	16.2	8.5
ROCKINGHAM COUNTY	259	79.7	25.7	34.8	21.7	20.1	24.1	10.0
EDEN CITY	232	75.3	7.6	31.8	21.7	17.8	23.1	11.5
WEST. ROCKINGHAM	221	63.0	6.4	27.1	20.6	23.1	22.0	21.0
REIDSVILLE CITY	209	71.8	9.8	23.7	45.9	43.0	22.5	13.2
STOKES COUNTY	295	52.5	14.7	13.9	8.1	9.2	20.4	10.3

NOTE: NUMBER TESTED IS THE NUMBER OF STUDENTS WHO TOOK THE ALGEBRA I TEST. PERCENT OF CLASS IS THE TOTAL NUMBER OF ALGEBRA I STUDENTS DIVIDED BY THE NUMBER OF STUDENTS IN THE NINTH GRADE CLASS. IT IS AN ESTIMATE OF THE PERCENT OF A COHORT OR CLASS OF STUDENTS WHO WILL TAKE ALGEBRA I BEFORE LEAVING HIGH SCHOOL. PERCENT OF EIGHTH GRADE IS THE PERCENT OF EIGHTH GRADE STUDENTS TAKING ALGEBRA I. PERCENT OF NINTH GRADE IS THE PERCENT OF NINTH GRADE STUDENTS TAKING ALGEBRA I. PERCENT BLACK IS THE PERCENT OF TOTAL ENROLLMENT THAT IS BLACK. PERCENT ALGEBRA I BLACK IS THE PERCENT OF ALGEBRA I STUDENTS THAT IS BLACK. PERCENT LESS THAN HS EDUC IS THE PERCENT OF EIGHTH GRADE STUDENTS TAKING THE CALIFORNIA ACHIEVEMENT TEST IN 1988 WHOSE PARENTS HAVE LESS THAN A HIGH SCHOOL EDUCATION. PERCENT ALGEBRA I LESS THAN HS EDUC IS THE PERCENT OF ALGEBRA I STUDENTS WHOSE PARENTS HAVE LESS THAN A HIGH SCHOOL EDUCATION.

TABLE 11, cont'd.

NORTH CAROLINA END-OF-COURSE TESTING PROGRAM

ALGEBRA I --- 1988

REGION SOUTHWEST REGION REPORT

	NUMBER TESTED	PERCENT OF CLASS	PERCENT OF EIGHTH GRADE	PERCENT OF NINTH GRADE	PERCENT BLACK	PERCENT ALGEBRA I BLACK	PERCENT LESS THAN HS EDUC	PERCENT ALGEBRA I LESS THAN HS EDUC
ANSON COUNTY	255	66.2	12.9	33.8	61.4	50.6	14.3	12.6
CABARRUS COUNTY	863	80.1	19.3	26.6	14.8	12.9	11.5	7.3
KANNAPOLIS CITY	282	73.4	14.8	45.6	27.0	27.0	32.8	16.8
CLEVELAND COUNTY	374	57.0	9.8	27.6	26.0	19.1	29.3	9.1
KINGS MTN. CITY	173	53.2	11.4	19.1	23.1	27.2	21.2	15.0
SHELBY CITY	184	72.7	19.5	29.2	44.2	29.1	15.8	5.6
GASTON COUNTY	1723	63.2	6.5	33.2	17.4	15.9	25.0	14.4
LINCOLN COUNTY	497	68.6	9.8	28.0	12.2	9.6	26.1	11.2
MECKLENBURG COUNT	4260	73.1	20.0	27.5	39.2	32.9	12.1	5.3
ROWAN COUNTY	726	67.8	16.4	22.4	16.4	18.9	15.5	10.8
SALISBURY CITY	126	64.3	13.6	23.5	57.2	52.4	13.8	7.4
STANLY COUNTY	370	66.3	28.7	20.4	12.5	5.4	20.9	11.7
ALBEMARLE CITY	122	76.3	0.0	35.0	28.6	20.5	19.1	9.1
UNION COUNTY	594	50.5	10.6	20.4	15.2	11.7	12.5	8.6
MONROE CITY	140	53.6	6.9	24.5	56.2	40.7	25.6	13.4

NOTE: NUMBER TESTED IS THE NUMBER OF STUDENTS WHO TOOK THE ALGEBRA I TEST. PERCENT OF CLASS IS THE TOTAL NUMBER OF ALGEBRA I STUDENTS DIVIDED BY THE NUMBER OF STUDENTS IN THE NINTH GRADE CLASS. IT IS AN ESTIMATE OF THE PERCENT OF A COHORT OR CLASS OF STUDENTS WHO WILL TAKE ALGEBRA I BEFORE LEAVING HIGH SCHOOL. PERCENT OF EIGHTH GRADE IS THE PERCENT OF EIGHTH GRADE STUDENTS TAKING ALGEBRA I. PERCENT OF NINTH GRADE IS THE PERCENT OF NINTH GRADE STUDENTS TAKING ALGEBRA I. PERCENT BLACK IS THE PERCENT OF TOTAL ENROLLMENT THAT IS BLACK. PERCENT ALGEBRA I BLACK IS THE PERCENT OF ALGEBRA I STUDENTS THAT IS BLACK. PERCENT LESS THAN HS EDUC IS THE PERCENT OF EIGHTH GRADE STUDENTS TAKING THE CALIFORNIA ACHIEVEMENT TEST IN 1988 WHOSE PARENTS HAVE LESS THAN A HIGH SCHOOL EDUCATION. PERCENT ALGEBRA I LESS THAN HS EDUC IS THE PERCENT OF ALGEBRA I STUDENTS WHOSE PARENTS HAVE LESS THAN A HIGH SCHOOL EDUCATION.

TABLE 11, cont'd.

NORTH CAROLINA END-OF-COURSE TESTING PROGRAM

ALGEBRA I --- 1988

REGION NORTHWEST

REGION REPORT

	NUMBER TESTED	PERCENT OF CLASS	PERCENT OF EIGHTH GRADE	PERCENT OF NINTH GRADE	PERCENT BLACK	PERCENT ALGEBRA I BLACK	PERCENT LESS THAN HS EDUC	PERCENT ALGEBRA I LESS THAN HS EDUC
ALEXANDER COUNTY	329	86.1	14.3	36.1	8.7	11.9	20.2	16.2
ALLEGHANY COUNTY	112	81.2	0.0	37.7	2.8	7.1	17.6	17.0
ASHE COUNTY	188	58.0	1.6	34.0	0.9	2.1	26.7	10.7
AVERY COUNTY	160	65.6	0.0	42.6	0.7	0.6	22.4	10.7
BURKE COUNTY	623	65.5	8.0	31.7	8.4	7.4	21.7	13.3
CALDWELL COUNTY	575	56.2	0.0	39.4	7.8	7.3	24.0	17.5
CATAWBA COUNTY	617	57.2	0.1	30.1	7.8	6.5	17.4	10.6
HICKORY CITY	347	78.7	20.8	30.2	26.4	20.5	22.1	9.3
NEWTON CITY	160	73.4	0.0	33.9	18.1	20.0	15.2	6.4
DAVIE COUNTY	290	69.9	13.0	34.2	10.9	9.7	9.0	7.6
IREDELL COUNTY	743	83.9	31.2	33.6	14.2	12.4	17.1	11.4
MOORESVILLE CITY	110	57.0	15.9	19.2	26.1	16.4	14.9	5.5
STATESVILLE CITY	168	60.9	0.0	29.3	53.6	37.5	25.3	9.0
SURRY COUNTY	454	65.4	11.0	28.8	4.3	3.3	19.9	10.6
ELKIN CITY	74	96.1	34.7	31.2	8.0	10.8	15.6	10.8
MOUNT AIRY CITY	102	74.5	16.9	26.3	12.5	14.7	25.8	13.7
WATAUGA COUNTY	264	68.0	16.8	29.4	1.3	0.4	13.9	6.1
WILKES COUNTY	515	57.1	6.5	26.2	6.0	8.0	24.9	14.2
YADKIN COUNTY	249	59.7	0.0	40.5	5.0	3.6	19.1	10.1

NOTE: NUMBER TESTED IS THE NUMBER OF STUDENTS WHO TOOK THE ALGEBRA I TEST. PERCENT OF CLASS IS THE TOTAL NUMBER OF ALGEBRA I STUDENTS DIVIDED BY THE NUMBER OF STUDENTS IN THE NINTH GRADE CLASS. IT IS AN ESTIMATE OF THE PERCENT OF A COHORT OR CLASS OF STUDENTS WHO WILL TAKE ALGEBRA I BEFORE LEAVING HIGH SCHOOL. PERCENT OF EIGHTH GRADE IS THE PERCENT OF EIGHTH GRADE STUDENTS TAKING ALGEBRA I. PERCENT OF NINTH GRADE IS THE PERCENT OF NINTH GRADE STUDENTS TAKING ALGEBRA I. PERCENT BLACK IS THE PERCENT OF TOTAL ENROLLMENT THAT IS BLACK. PERCENT ALGEBRA I BLACK IS THE PERCENT OF ALGEBRA I STUDENTS THAT IS BLACK. PERCENT LESS THAN HS EDUC IS THE PERCENT OF EIGHTH GRADE STUDENTS TAKING THE CALIFORNIA ACHIEVEMENT TEST IN 1988 WHOSE PARENTS HAVE LESS THAN A HIGH SCHOOL EDUCATION. PERCENT ALGEBRA I LESS THAN HS EDUC IS THE PERCENT OF ALGEBRA I STUDENTS WHOSE PARENTS HAVE LESS THAN A HIGH SCHOOL EDUCATION.

TABLE 11, cont'd.

NORTH CAROLINA END-OF-COURSE TESTING PROGRAM

ALGEBRA I --- 1988

REGION WESTERN REGION REPORT

	NUMBER TESTED	PERCENT OF CLASS	PERCENT OF EIGHTH GRADE	PERCENT OF NINTH GRADE	PERCENT BLACK	PERCENT ALGEBRA I BLACK	PERCENT LESS THAN HS EDUC	PERCENT ALGEBRA I LESS THAN HS EDUC
BUNCOMBE COUNTY	1342	66.7	9.3	29.7	5.6	5.2	16.0	6.6
ASHEVILLE CITY	212	68.2	6.5	31.8	40.9	33.2	16.3	7.2
CHEROKEE COUNTY	185	55.6	0.0	38.1	2.4	1.6	24.1	8.2
CLAY COUNTY	63	53.4	0.0	33.9	1.1	0.0	18.8	11.9
GRAHAM COUNTY	94	77.0	20.0	31.1	0.0	0.0	23.2	20.2
HAYWOOD COUNTY	480	72.6	13.0	31.6	1.9	2.3	19.7	11.3
HENDERSON COUNTY	415	62.4	16.8	25.7	1.5	1.7	17.3	5.6
HENDRSNVLLE CITY	138	85.2	15.9	42.0	26.9	23.2	24.3	7.3
JACKSON COUNTY	202	63.3	9.6	32.9	1.3	2.0	21.0	9.5
MACON COUNTY	183	66.1	0.0	37.9	1.2	2.2	20.6	12.0
MADISON COUNTY	129	49.0	0.0	27.4	0.3	0.0	32.7	8.6
MCDOWELL COUNTY	406	71.2	10.3	32.1	5.2	5.7	13.9	14.6
MITCHELL COUNTY	192	91.4	31.3	35.7	0.1	0.5	26.6	10.0
POLK COUNTY	86	57.3	7.6	34.7	10.1	4.8	23.5	9.3
TRYON CITY	54	90.0	32.4	25.0	22.0	22.2	6.7	9.3
RUTHERFORD COUNTY	442	50.5	0.0	29.2	16.1	14.5	18.1	13.2
SWAIN COUNTY	115	68.0	17.9	30.2	0.5	0.0	13.3	10.6
TRANSYLVANIA COUN	255	78.5	15.2	32.0	7.0	8.2	10.7	7.6
YANCEY COUNTY	116	44.3	0.0	24.8	0.9	1.7	13.9	12.4

NOTE: NUMBER TESTED IS THE NUMBER OF STUDENTS WHO TOOK THE ALGEBRA I TEST. PERCENT OF CLASS IS THE TOTAL NUMBER OF ALGEBRA I STUDENTS DIVIDED BY THE NUMBER OF STUDENTS IN THE NINTH GRADE CLASS. IT IS AN ESTIMATE OF THE PERCENT OF A COHORT OR CLASS OF STUDENTS WHO WILL TAKE ALGEBRA I BEFORE LEAVING HIGH SCHOOL. PERCENT OF EIGHTH GRADE IS THE PERCENT OF EIGHTH GRADE STUDENTS TAKING ALGEBRA I. PERCENT OF NINTH GRADE IS THE PERCENT OF NINTH GRADE STUDENTS TAKING ALGEBRA I. PERCENT BLACK IS THE PERCENT OF TOTAL ENROLLMENT THAT IS BLACK. PERCENT ALGEBRA I BLACK IS THE PERCENT OF ALGEBRA I STUDENTS THAT IS BLACK. PERCENT LESS THAN HS EDUC IS THE PERCENT OF EIGHTH GRADE STUDENTS TAKING THE CALIFORNIA ACHIEVEMENT TEST IN 1988 WHOSE PARENTS HAVE LESS THAN A HIGH SCHOOL EDUCATION. PERCENT ALGEBRA I LESS THAN HS EDUC IS THE PERCENT OF ALGEBRA I STUDENTS WHOSE PARENTS HAVE LESS THAN A HIGH SCHOOL EDUCATION.

TABLE 12

State Percentile Table for 1986

End of Course Testing

STATE

NORTH CAROLINA END-OF-COURSE TESTING PROGRAM
ALGEBRA I --- 1986

SUMMARY STATISTICS ON CORE TEST

NUMBER OF STUDENTS WITH VALID SCORES	63330	HIGH SCORE	60
		LOW SCORE	2
MEAN	37.7	LOCAL PERCENTILES	RAW SCORE
STANDARD DEVIATION	9.3	90	50
		75	44
VARIANCE	85.8	50 (MEDIAN)	38
		25	31
MEAN PERCENT CORRECT	62.9	10	26

FREQUENCY DISTRIBUTION

RAW SCORE	FREQUENCY	CUMULATIVE FREQUENCY	PERCENT	CUMULATIVE PERCENT	STATE PERCENTILE
60	84	63330	0.13	100.00	99
59	185	63246	0.29	99.87	99
58	268	63061	0.42	99.58	99
57	348	62793	0.55	99.15	98
56	490	62445	0.77	98.60	98
55	565	61955	0.89	97.83	97
54	693	61390	1.09	96.94	96
53	870	60697	1.37	95.84	95
52	999	59827	1.58	94.47	93
51	1162	58828	1.83	92.89	91
50	1263	57666	1.99	91.06	90
49	1441	56403	2.28	89.06	87
48	1573	54962	2.48	86.79	85
47	1752	53389	2.77	84.30	82
46	1954	51637	3.09	81.54	78
45	2027	49683	3.20	78.45	76
44	2204	47656	3.48	75.25	73
43	2285	45452	3.61	71.77	69
42	2351	43167	3.71	68.16	66
41	2538	40816	4.01	64.45	62
40	2500	38278	3.95	60.44	58
39	2545	35778	4.02	56.49	54
38	2465	33233	3.89	52.48	50
37	2487	30768	3.93	48.58	46
36	2575	28281	4.07	44.66	42
35	2410	25706	3.81	40.59	38
34	2423	23296	3.83	36.79	34
33	2262	20873	3.57	32.96	31
32	2197	18611	3.47	29.39	27
31	2060	16414	3.25	25.92	24
30	1983	14354	3.13	22.67	21
29	1815	12371	2.87	19.53	18
28	1614	10556	2.55	16.67	15
27	1368	8942	2.16	14.12	13
26	1278	7574	2.02	11.96	10
25	1201	6296	1.90	9.94	8
24	946	5095	1.49	8.05	7
23	790	4149	1.25	6.55	5
22	708	3359	1.12	5.30	4
21	562	2651	0.89	4.19	3
20	489	2089	0.77	3.30	2
19	404	1600	0.64	2.53	2
LESS THAN 19	1196	1196	1.89	1.89	1

TABLE 13

State Percentile Table for 1987

STATE

NORTH CAROLINA END-OF-COURSE TESTING PROGRAM
ALGEBRA I --- 1987

SUMMARY STATISTICS ON CORE TEST

End of Course Testing

NUMBER OF STUDENTS WITH VALID SCORES	61003	HIGH SCORE	60
		LOW SCORE	4
MEAN	39.2	LOCAL PERCENTILES	RAW SCORE
STANDARD DEVIATION	9.8	90	52
		75	46
VARIANCE	95.3	50 (MEDIAN)	40
		25	32
MEAN PERCENT CORRECT	65.3	10	26

FREQUENCY DISTRIBUTION

RAW SCORE	FREQUENCY	CUMULATIVE FREQUENCY	PERCENT	CUMULATIVE PERCENT	STATE PERCENTILE
60	132	61003	0.22	100.00	99
59	261	60871	0.43	99.78	99
58	372	60610	0.61	99.36	99
57	532	60238	0.87	98.75	98
56	688	59706	1.13	97.87	97
55	779	59018	1.28	96.75	96
54	960	58239	1.57	95.47	95
53	1085	57279	1.78	93.90	93
52	1310	56194	2.15	92.12	91
51	1486	54884	2.44	89.97	89
50	1666	53398	2.73	87.53	86
49	1750	51732	2.87	84.80	83
48	1992	49982	3.27	81.93	80
47	2146	47990	3.52	78.67	77
46	2214	45844	3.63	75.15	73
45	2356	43630	3.86	71.52	70
44	2333	41274	3.82	67.66	66
43	2335	38941	3.83	63.83	62
42	2382	36606	3.90	60.01	58
41	2362	34224	3.87	56.10	54
40	2353	31862	3.86	52.23	50
39	2231	29509	3.66	48.37	47
38	2231	27278	3.66	44.72	43
37	2124	25047	3.48	41.06	39
36	2019	22923	3.31	37.58	36
35	1925	20904	3.16	34.27	33
34	1845	18979	3.02	31.11	30
33	1788	17134	2.93	28.09	27
32	1641	15346	2.69	25.16	24
31	1558	13705	2.55	22.47	21
30	1392	12147	2.28	19.91	19
29	1296	10755	2.12	17.63	17
28	1240	9459	2.03	15.51	14
27	1149	8219	1.88	13.47	13
26	1029	7070	1.69	11.59	11
25	975	6041	1.60	9.90	9
24	859	5066	1.41	8.30	8
23	761	4207	1.25	6.90	6
22	680	3446	1.11	5.65	5
21	611	2766	1.00	4.53	4
20	506	2155	0.83	3.53	3
19	400	1649	0.66	2.70	2
LESS THAN 19	1249	1249	2.05	2.05	2

TABLE 14

State Percentile Table for 1988

End Of Course Testing

STATE

NORTH CAROLINA END-OF-COURSE TESTING PROGRAM
ALGEBRA 1 --- 1988

SUMMARY STATISTICS ON CORE TEST

NUMBER OF STUDENTS WITH VALID SCORES	59723	HIGH SCORE	60
		LOW SCORE	6
MEAN	39.2	LOCAL PERCENTILES	RAW SCORE
STANDARD DEVIATION	9.5	90	51
		75	46
VARIANCE	89.5	50 (MEDIAN)	40
		25	33
MEAN PERCENT CORRECT	65.3	10	26

FREQUENCY DISTRIBUTION

RAW SCORE	FREQUENCY	CUMULATIVE FREQUENCY	PERCENT	CUMULATIVE PERCENT	STATE PERCENTILE
60	88	59723	0.15	100.00	99
59	174	59635	0.29	99.85	99
58	334	59461	0.56	99.56	99
57	501	59127	0.84	99.00	99
56	632	58626	1.06	98.16	98
55	799	57994	1.34	97.10	96
54	902	57195	1.51	95.77	95
53	1086	56293	1.82	94.26	93
52	1224	55207	2.05	92.44	91
51	1491	53983	2.50	90.39	89
50	1491	52492	2.50	87.89	87
49	1736	51001	2.91	85.40	84
48	1800	49265	3.01	82.49	81
47	1985	47465	3.32	79.48	78
46	1990	45480	3.33	76.15	74
45	2179	43490	3.65	72.82	71
44	2197	41311	3.68	69.17	67
43	2442	39114	4.09	65.49	63
42	2313	36672	3.87	61.40	59
41	2462	34359	4.12	57.53	55
40	2368	31897	3.96	53.41	51
39	2414	29529	4.04	49.44	47
38	2443	27115	4.09	45.40	43
37	2270	24672	3.80	41.31	39
36	2181	22402	3.65	37.51	36
35	2056	20221	3.44	33.86	32
34	1917	18165	3.21	30.42	29
33	1797	16248	3.01	27.21	26
32	1694	14451	2.84	24.20	23
31	1590	12757	2.66	21.36	20
30	1475	11167	2.47	18.70	17
29	1315	9692	2.20	16.23	15
28	1222	8377	2.05	14.03	13
27	1024	7155	1.71	11.98	11
26	974	6131	1.63	10.27	9
25	873	5157	1.46	8.63	8
24	765	4284	1.28	7.17	7
23	666	3519	1.12	5.89	5
22	523	2853	0.88	4.78	4
21	464	2330	0.78	3.90	4
20	414	1866	0.69	3.12	3
19	351	1452	0.59	2.43	2
LESS THAN 19	1101	1101	1.84	1.84	2